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IN THE

Supreme Court of the United States

October Term, 1982

DOLLAR ELECTRIC COMPANY,
Petitioner,
v.
SYNDEVCO, INC., and
FORD MOTOR COMPANY,
Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

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QUESTIONS PRESENTED

1. Is there a special, more strict, non-statutory test for determining the validity of patents for so-called "combination" inventions as is the rule in the Fifth, Sixth and Eighth circuits, or, does the test set forth in 35 USC 103 of obviousness or non-obviousness apply to patents for all inventions, whatever their type, as is the rule in the Third and Seventh circuits, and at least one panel of the Ninth circuit?

2. Does the novel "law of the case" theory pronounced by the Court of Appeals by which the Court found appealed claims invalid through an invidious comparison of non-appealed claims found invalid by the District Court constitute an impermissable conflict with the express language of the second sentence of 35 USC 282 that "each claim of a patent . . . shall be presumed valid independently of the validity of other claims . . ."?

3. Does the last sentence of 35 USC 282 permit a district court to fashion a hypothetical combination of prior art to support a finding of invalidity in the court's post-trial deliberations where *no* evidence was submitted during trial as to the hypothetical combination relied upon by the court?

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OPINIONS BELOW

The opinion of the District Court of September 10, 1979 is reported at 205 USPQ 949 (E.D. Mich. 1979) and appears as Petitioner's Appendix A. The opinion of the Court of Appeals of February 12, 1982 is reported at 669 F.2d 1370, and appears as Petitioner's Appendix B. The Court of Appeals' decision of April 20, 1982 denying rehearing appears as Petitioner's Appendix C.

JURISDICTION

The Judgment of the United States Court of Appeals of the Sixth Circuit was entered on February 12, 1982; Petitioner's subsequent petition for rehearing or rehearing en banc was denied on April 20, 1982. Justice O'Connor granted an extension of time to file this Petition to and including August 18, 1982.

The jurisdiction of this Court is invoked under 28 USC § 1254(1).

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED

Article 1, Section 8, Clause 8 of the Constitution, and 35 USC §§ 103 and 282 are involved, and are reproduced in pertinent part below:

> Art. 1, Sec. 8. The Congress shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

> 35 USC § 103. Conditions for patentability; non-obvious subject matter

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

§ 282. Presumption of validity; defenses.

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

* * *

In actions involving the validity or infringement of a patent the party asserting invalidity or non-infringement shall give notice in the pleadings or otherwise in writing to the adverse party at least thirty days before the trial, of the country, number, date, and name of the patentee of any patent, the title, date, and page numbers of any publication to be relied upon as anticipation of that patent in suit, or, . . . as showing the state of the art, . . . In the absence of such notice proof of the same matters may not be made at the trial except on such terms as the court requires.

STATEMENT OF THE CASE

This is a patent infringement suit brought in the District Court by petitioner under 28 USC 1338.

At issue in this Petition is a ruling by the District Court that claims 4 and 5 of the Winsand United States Patent 3,281,747 (Pet. App. D-1) (the "Winsand patent") are invalid for failing to produce a "synergistic" result.

The invention of the Winsand patent has had an important impact in the mass production of automobiles. The invention is used throughout the automotive industry and has been adopted as the standard resistance welding transformer at all plants in the Metal Stamping Division of Ford. This alone represents some 20,000 transformers. Ford uses some 50,000 transformers in its manufacturing operations.

Mr. Karl Sarafian, a supervisory engineer specializing in resistance welding at the Fisher Body Division of General Motors Corporation, testified that the Winsand invention was a "major development."

In the mass production of automobiles, resistance welding machines are used in which gangs of resistance welding transformers and associated electrodes are mounted side-by-side to simultaneously form a large number of spot welds. The spacing between the electrodes is important; it determines the number of spot welds that can be formed in a single operation.

Resistance welding machines of pre-World War II vintage (Martin '867 Pet. App. E-1) had transformers so large that they had to be located remotely from the welding electrodes in order to position adjacent pairs of the electrodes close together.

After World War II, the industry began to convert mass production welding machines to a development known as "package" transformers. Package transformers are small transformers of the type that can be installed side-by-side on a welding machine and can be individually removed and installed for repair and replacement, providing greater flexibility in the design and operation of mass production welding machines.

Much of the development of package type resistance welding transformers during the 1950's and early 1960's

was done at Kirkhof Manufacturing Company, the world's largest manufacturer of resistance welding transformers.

One of the problems in the resistance welding art since the development of package transformers is the necessity to provide some means to adjust the output voltage of the transformer to accommodate different thicknesses and/or different materials of the parts to be welded together. This is done by applying the power source across different pairs of taps. The input voltage is supplied to the transformer through a detachable primary disconnect plug. All through the 1950's and early 1960's, package transformers were equipped with a rotary tap switch for switching the power supplied to the transformer primary from one pair of taps to another, Girton '431 and '838 (Pet. App. F-1, J-1)

A package transformer disclosed in Girton U.S. Patent 3,204,431 (Girton '431, Pet. App. F-1) developed at Kirkhof had become the standard resistance welding transformer in the automotive industry at the time the invention of the Winsand patent was made.

In the late 1950's, the automobile industry began to use galvanized steel in automobile bodies, which required a higher amount of energy in order to form a proper weld. An attempt was made at Kirkhof to solve this problem by reducing the size of the transformer to permit it to be moved closer to the electrodes, and thereby reduce energy losses. This attempt resulted in United States Patent No. 2, 929,915 (Pet. App. G-1) to Taylor, et al. This invention was never put into production because it did not have any means for adjusting the secondary voltage.

There were three outstanding problems with the Girton '431 transformer. During operation, all of the transformers of a welding machine equipped with Girton

'431 transformers must have their tap switches properly set by authorized, skilled personnel, only. It is easy for an unskilled workman to change the tap setting, without authorization, simply by rotating the tap switch level from one position to another. Improper and unsafe welds result from an incorrect tap setting.

Another problem is that the mechanical construction of the rotary tap switch of Girton '431 required a minimum amount of space, which places a limitation on the minimum size of the transformer. This, in turn, limits the minimum spacing between the electrodes of adjacent pairs of transformers. There was a need to decrease the spacing between the transformers so that a greater amount of spot welds per unit length could be formed with a single operation.

Condensation occurs within the tap switch housing. Girton '431 has a complex tap switch mechanism which provides paths for short circuits aggravated by the accumulation of moisture and other contaminants.

In 1960, the Fisher Body Division of General Motors Corporation requested Kirkhof to determine if a transformer could be designed in which the primary disconnect plug could also serve as the tap switch. Skepticism was indicated by Mr. Emaus, the manager of the transformer division of Kirkhof, in a letter of December 28, 1960:

> ". . . Also, recently with the requirement of a new tap switch, the idea of incorporating a plug-in tap change switch was advanced, we are going to make sketches of this idea to see if it is feasible . . . Since this is in an idea stage, we cannot make a prediction as to its ever becoming a reality, and certainly if it did we do not

know how long before it could become a standard production item."

Work on this project was conducted at Kirkhof between December 28, 1960 and September, 1962.

Mr. Emaus made a sketch (DX HH) of his recollection of the construction of a plexiglass model. This model was never tested; it could not be because it could not have electrical power applied to it. It was different from later versions designed by Kirkhof.

Mr. Roth, an engineer at Kirkhof, was instructed by Mr. Emaus to design a transformer having a combined plug and tap switch. A drawing (DX X) was completed on July 30, 1962. Detailed drawings were completed in September, 1962. The project was then shelved — the design was not satisfactory to Fisher Body.

In early 1962, Fisher Body requested Dollar Electric to design a narrow transformer, one 4½ inches wide. Mr. Winsand began work on this project in April, 1962. He completed a 4½ inch wide transformer sometime in the Spring of 1962. This transformer had limited utility because it, too, did not have any means for adjusting the secondary voltage.

Mr. Winsand attempted to equip the narrow transformer with a tap switch. None of the available tap switches, including those used in Girton '431 transformers, were acceptable. They could not function within the 4½ inch wide space. There was insufficient space for the tap switch and primary disconnect plug in side-by-side relationship.

After unsuccessfully trying several versions of available tap switches, Mr. Winsand came up with the idea of combining the functions of the primary

disconnect plug and tap switch. This was accomplished by selecting an arrangement of primary tap terminals, and a construction of the primary disconnect plug, that would permit the primary disconnect plug to engage different pairs of the tap terminals and so that the output voltage of the transformer secondary would vary depending upon which pair of tap terminals was engaged by the primary disconnect plug. *All* moving parts of the tap switch of the Girton '431 transformers were eliminated, and the width of the Winsand patented transformer could be reduced to 4½ inches as compared to the 7¼ inch minimum width of the Girton '431 type transformers.

The transformers of the Winsand patent were built and tested by July 9, 1962 and were immediately placed into service at the Marion, Indiana plant of Fisher Body. Respondent Ford promptly began purchasing the Winsand transformers from petitioner for use on its welding machines under the supervision of Mr. John Murphy.

The advantages of the Winsand invention were promptly recognized:

(a) The construction of package type resistance welding transformers were significantly simplified; *all* moving parts of the tap switch were eliminated, including the star wheel, springs, levers and cam followers of Girton '431.

(b) The cost of manufacturing the Winsand patented transformer is substantially less than that of the Girton '431 transformer.

(c) It is impossible to accidentally change the tap setting of the patented transformer as is the case with

Girton '431 where the switch lever can be accidentally moved from one position to another.

(d) The patented transformer could have substantially less width than the prior art transformers making it possible to increase the number of spot welds per unit of length for each welding operation.

(e) The elimination of all moving parts of the tap switch eliminated possible paths for short circuits caused by the possible accumulation of moisture, condensation and possible leakage of other contaminants into the portion of the transformer housing enclosing the switch mechanism.

(f) The cover plate is secured to the plug in such a way that it overlies and seals the opening in the housing to protect the plug and tap terminals in any of the operable positions of the plug.

For ten years, Ford used the transformers of the Winsand patent at its Metal Stamping Division on machines supervised by Mr. Murphy. Mr. Murphy then designed the accused device which, as found by the district court, is "virtually identical to Winsand" (Petitioner's App. A-34). Ford is replacing *all* of the Girton '431 transformers with the Murphy version of the invention of the Winsand patent; the invention has been adopted as the standard resistance welding transformer at the Metal Stamping Division of Ford. Ford uses *fifty-thousand* resistance welding transformers in its manufacturing operations.

During pre-trial discovery, respondents cited 39 patents under the notice provisions of 35 USC 282 — *not* including Girton '431 — as an attack on the validity of the Winsand patent. In the Joint Pre-Trial Order

filed in the District Court, respondents culled the list of 39 patents to 13. This list of 13 also did *not* include Girton '431.

At trial, the attack on validity by respondents was based primarily on Cage '492 (Pet. App. H-1) and an Italian Patent No. 315,072 to Bauer for a camera (and its corresponding German Utility Model Patent No. 1,303,494 Pet. App. I-1).

In its opinion, the District Court struck down the attacks on the validity of claims 4 and 5 of the Winsand patent by respondents at trial. Nevertheless, without hearing or evidence, in its post-trial considerations, the District Court, sua sponte, fashioned a hypothetical combination of Girton '431 and Bauer, and ruled claims 4 and 5 of the Winsand patent to be invalid in view of this combination (Petitioner's App. 34):

> "In arriving at this conclusion, I have reviewed claims 4 and 5 as 'combination patents.' . . . The test for such patents is that they must produce a synergistic result; they must somehow exceed the sum of their parts . . ."

No evidence was presented during the pre-trial proceedings, or at the trial, of invalidity based on Girton '431.

No evidence was presented during the pre-trial proceedings, or at the trial, of invalidity based on a hypothetical combination of Girton '431 and Bauer.

The hypothetical combination of Girton '431 and Bauer *surfaced for the first time in the District Court opinion.* Under the aegis of "synergism," the notice provisions of § 282 were circumvented; the District Court took upon itself the burden of establishing invalidity under the third sentence of § 282 after ruling that respondents had failed to meet that burden.

The district court also found claims 4 and 5 to be infringed by the accused device, and found that claims 1-3 of the Winsand patent were invalid.

Petitioner appealed from the District Court's ruling on invalidity of claims 4 and 5 — but not claims 1-3. In a nine page opinion (Petitioner's App. B), including a concurring opinion of Circuit Judge Engle, the Court of Appeals concluded "In our opinion, the findings of fact adopted by the district court are supported by substantial evidence and its conclusions of law are correct."

Additionally, the Court of Appeals held that "Since Dollar did not appeal from the judgment of the district court holding that [sic] claims 1, 2 and 3 to be invalid, that part of the judgment has now become final and is the law of the case." The majority of the Court of Appeals then made an invidious comparison of claims 4 and 5 with non-appealed claims 1, 2 and 3 which drew the concurring opinion of Circuit Judge Engle: "I would avoid the suggestion in the majority decision that the trial judge's rejection of claim 2, not appealed from here, is the law of the case' and for this reason commands a similar result for claim 4 [because of the second sentence of 35 USC § 282] . . ." The Court of Appeals also implicitly refused to follow its pre-*Sakraida* decisions in *Tee-Pak v. St. Regis Paper Co.*, 491 F.2d 1193 (6th Cir. 1974); *Tapco Products Co. v. Van Mark Products Corp.*, 446 F.2d 420 (6th Cir. 1971) and *Buzzelli v. Minnesota Mining & Mfg. Co.*, 480 F.2d 541 (6th Cir. 1973).

In *Tee-Pak*, the District Court was reversed for, after hearing argument on a motion for summary judgment, interjecting ". . . his personal opinion to resolve such issues [patent validity]" 491 F.2d at 1201.

In the case at bar, the hypothetical combination of Girton '431 and Bauer came solely from the mind of the District Judge in his post trial deliberations, and Dollar *never* had an opportunity to present a contrary argument.

In *Buzzelli*, the District Court was reversed for granting a motion for summary judgment on invalidity, on the grounds that the invention was "obvious" to the district judge. The Sixth Circuit stated, 480 F.2d at 542, 543:

> "The determination of this issue [obviousness] calls for a *factual inquiry regarding the experience of those skilled in the art* . . .
>
> Under § 103 a patent may not issue where the subject matter would have been obvious at the time the invention was made to one having ordinary skill in the art. While this test is far from precise, we hold that the district court erred in finding invalidity on the theory that if a development is obvious to the court, it must be obvious to a person having ordinary skill in the art . . . (emphasis added)."

In the case at bar, the hypothetical combination of Girton '431 and Bauer was obvious *only* to the District Judge. It escaped the witnesses, expert and non-expert, and the lawyers from Ford and Syndevco. There was *no* factual inquiry.

In *Tapco*, the District Court ruled the patent in suit invalid based on a demonstration by counsel for the defendant in rebuttal to the testimony of plaintiff's expert, 318 F. Supp. 79 (E.D. Mich. 1970). The Sixth Circuit reversed, 446 F.2d at 428, 429:

> ". . . the demonstration by opposing counsel more properly should have been made as a part of the

> cross-examination . . . or least it could have been supported by sworn testimony of witnesses with the right of plaintiff to cross examine. The unsworn, self-serving statements of counsel are not evidence."

Unlike the District Judge in the case at bar, each of the judges in *Tee-Pak, Tapco* and *Buzzelli* made their decisions *after* the patentees had notice *prior to or during trial* of the specific grounds on which validity of the respective patents were to be attacked, and were at least permitted to submit arguments. Even so, this was not sufficient to satisfy the fairness requirements underlying the notice provisions of 35 USC 282. The Sixth Circuit reversed all three.

Prior to the case at bar, the minimum notice standard in the Sixth Circuit is stated in *Shatterproof Glass Corp. v. Guardian Glass Co.*, 462 F.2d 1115, 1121 (6th Cir. 1972):

> . . . The right to this notice may be waived, . . . The mere breach of Sec. 282 does not necessarily require reversal. Absent the required notice, the trial court may still allow proof of the prior art *where fairness is not sacrificed*, . . . (emphasis aded).

This standard was not met in the case at bar because the hypothetical combination of Girton '431 and Bauer was an afterthought of the District Judge that surfaced *for the first time in his decision*. No proof was offered. No argument was made. *All* fairness was sacrificed.

The Court of Appeals' decision in the case at bar cannot be squared with its pre-*Sakraida, Tee-Pak, Tapco, Buzzelli, and Shatterproof Glass* decisions. Implicitly, courts can circumvent the requirements of § 282 if, under the aegis of "synergism" there is a conclusory finding that the invention fails to produce a "synergistic result."

The last sentence of § 282 explicitly requires proof *at trial*. "In the absence of such notice proof of the same matters *may not be made at trial* . . ." Since *no* proof was offered *at trial* of a hypothetical combination of Girton '431 and Bauer, it is absurd to suggest that the minimum fairness requirement of § 282 has been met.

REASONS FOR GRANTING THE WRIT

I.

THE "SYNERGISTIC" TEST IS CONTRARY TO THE *GRAHAM V. DEERE* ANALYSIS OF § 103, NEGATES THE CONGRESSIONAL INTENT IN ENACTING § 103, AND IS INHERENTLY SUBJECTIVE BECAUSE IT CAN ONLY BE APPLIED IN CONCLUSORY STATEMENTS; IT HAS BEEN REJECTED IN SOME CITCUITS, REQUIRED IN OTHERS, AND IS INEXPLICABLE IN ALL.

There is chaos in patent law resulting from this Court's decisions in *Anderson's-Black Rock, Inc. v. Pavement Salvage Company*, 396 U.S. 57 (1969), coupled with *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976).

These decisions reached back in time, prior to the 1952 Patent Act, and resurrected the special, non-statutory test for so-called "combination" patents of *Great A & P Tea Co. v. Supermarket Equipment Corp.*, 347 U.S. 147 (1950). Under the *A & P* test, patents to "combinations" must be "closely scrutinized" and held to be invalid when "two and two have been added together, and still they make only four," 347 U.S. at 152. As stated in *Sakraida*, there must be a "synergistic" result, "that is, 'result[ing] in an effect greater than the sum of the several effects taken separately,' " 425 U.S. at 282. These decisions nullified the non-obviousness test of 35 USC 103, and the analysis of § 103 in *Graham v. Deere*, 383

U.S. 1 (1966)[1] insofar as "combination" inventions are concerned; "combination" inventions are now subjected to what has become known as the "synergistic" test instead of the statutory "non-obviousness" test in the Fifth, Sixth and Eighth Circuits.

The Third and Seventh circuits, however, have found the synergistic test impossible to reconcile with 35 USC 103 and *Graham v. Deere*, and do not follow it, *Rengo Co., Ltd. v. Molins Machine Co.*, 657 F.2d 535, 544-546 (3rd Cir. 1981), *Republic Industries v. Schlage Lock Co.*, 592 F.2d 963, 970-71 (7th Cir. 1979):

> "When using the synergism approach to determine whether one element functions differently or whether the whole somehow exceeds the parts, one is required to look solely to the operation of the elements *after* they are combined. This analysis suffers from two defects. First, a test which looks exclusively to the functioning of the individual components after they are combined must necessarily be premised on the assumption that it is always obvious to take known elements and to combine them. . .
>
> The second and more basic defect with synergism is that § 103 sets as the standard of patentability the non-obviousness of the invention 'at the time the

---

[1] "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject sought to be patented. As indicia of obviousness or non-obviousness, these inquiries may have relevance." 383 U.S. at 17.

> invention was made to a person having ordinary skill in the art. . .' . . .from this vantage point the critical question becomes whether the level of skill in the art was such that the combining of elements in the manner claimed would have been obvious, not in retrospect, but at the time it was done by the inventor. . .Synergism, however, precluded this analysis.
>
> Because synergism centers exclusively on the performance of the elements *after* combination and without regard to the obviousness or non-obviousness of *making the combination* synergism does not comport with the Graham [v. Deere] mandate to apply § 103."

The Ninth circuit is in disarray over the synergistic test. One panel has recently joined the Third and Seventh circuits in rejecting the synergistic test, *Sarkisian v. Winn-Proof Corp.*, published in the advance sheets at 662 F.2d 596, 601-606 (9th Cir. 1981), but withdrawn from publication in the bound volume of 662 F.2d because rehearing en banc has been granted; there is a conflict among different panels within the Ninth circuit over whether the synergistic test should be applied.[2]

At least insofar as the mechanical and electrical arts are concerned, nobody seems to know what constitutes a *non*-combination invention, or how to articulate whether a "combination device" produces a result which is "greater than the sum of its parts," or whether, for determining patentability, the elements "perform a new

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[2] For an excellent discussion of the confusion in the courts over the synergism issue, see "Factors Of Synergism And Level Of Ordinary Skill In The Pertinent Art In Section 103 Determinations" by Judge Jack R. Miller of the CCPA in the APLA Quarterly Journal, Vol. 8, No. 4, 1980.

or different function." As the Ninth Circuit noted in *Sarkisian*, 662 F.2d at 605-607 (advance sheets only):

> "The requirement that a combination device must produce a result which is 'greater than the sum of its parts' is clearly only a figure of speech: an invention cannot be truly greater than the sum of its parts without creating something out of nothing, which would violate the laws of nature as we know them. . .
>
> * * *
>
> Lastly, it is sometimes said that the elements of the combination produce a 'synergistic' result if they perform a new or different function in the device in question . . . However, sameness or difference of function cannot be a sufficient condition of either the obviousness or the non-obviousness of combination devices, because the elements in combination devices almost always perform functions which in some sense are the same as and in some sense are different from the roles they played in the prior art.
>
> . . . On the most general level of description, for example, the elements in a combination device will play the 'same' role in the invention as they play in every other mechanical device of which they are a part: as Judge Learned Hand once noted, 'all machines are made up of the same elements: rods, pawls, pitmans, journals, toggles, gears, cams and the like, all acting their parts as they always do and always must.' Even when we narrow our focus to the specific role played by the elements in question in the prior pertinent art, it is almost inevitable that the elements under scrutiny will play 'the same' role in the new invention as they played in the device of prior art: by definition the elements composing the new

'combination' invention are already found in and are taken from the prior art. Finally, it is almost inevitable that the elements of the invention will play 'a new and different role' in the new invention than they played in the prior art, because the 'function' of any element can reasonably be described in terms of the role that element plays in achieving the new result brought about by the invention.

. . . Thus, depending on how one chooses to describe the role of the [elements], they play both 'the same function' and a 'new and different function' from those in prior art devices.

Any combination invention which introduces some feature of novelty — in its results, in its manner of operation, or in any other significant way — will utilize elements which can be described as performing a 'new or different function.' The element's 'function' need only be described in terms of its role in contributing to the invention's novelty to achieve that result. At the same time, it will almost always be the case that these elements play the 'same' role in the invention as they played in the prior art from which they are, by definition, taken. It cannot be, therefore, that a combination invention is non-obvious whenever its elements perform a 'new and different function'; nor is it true that 'sameness' of function is by itself a definitive indication of obviousness. . ."

II

THE CAPRICIOUSNESS OF THE SYNERGISTIC TEST IS STRIKINGLY DEMONSTRATED BY THE CASE AT BAR. EXCEPT FOR RESULTS, THERE WAS NO CONSISTENCY IN THE ANALYSIS BY RESPONDENTS, THE DISTRICT COURT AND COURT OF APPEALS

Nothing could better demonstrate the capriciousness of the synergistic test than the findings made in the District Court opinion in the case at bar.

The District Court found:

1. That "In 1960, William Emaus (of Kirkhof Manufacturing Company, the world's largest manufacturer of resistance welding transformers) . . . hit upon the notion that the disconnect plug used by Girton '431 might be modified to perform the function of the tap switch . . . although this may have been suggested by Karl Sarafian. The virtues of such an arrangement were explained by Sarafian to be the elimination of the moving parts from the tap switch mechanism and an increased reliability that would result." (Petitioner's App. A-16, 17).

2. That "development of the idea seems to have lapsed entirely until early 1962 when Emaus said a prototype [actually a plexiglass model] of the HH device was built." (Petitioner's App. A-17).

3. That a drawing (the "X" project) was begun in the Spring of 1962 and completed on July 30, 1962. After its completion, a series of detailed drawings were completed in September, 1962, and the X project was then shelved; it was never tested or put into production (Petitioner's App. A-18).

4. That in March or April of 1962, a Fisher Body Production Engineer requested of Mr. Winsand that Dollar try to develop a narrow transformer that could produce several output voltages (Petitioner's App. A-19).

5. That "A narrow transformer was made easily [by Winsand]. The variable output feature proved more troublesome due to the unavailability of narrow tap switches." (Petitioner's App. A-19)

6. That Winsand "fashioned a prototype of the device described in claim 5 of [the Winsand patent] . . . before June 18 when Winsand made a drawing, PTX 26, showing the device in detail." (Petitioner's App. A-19).

7. That in July, 1962 the Winsand device had been tested, and "very soon thereafter several were sold and shipped to Fisher Body's Marion, Indiana facility. Ford was buying it within a few months." (Petitioner's App. A-20).

8. That the project that had been shelved in September, 1962 at Kirkhof reasserted itself early in 1963, and a drawing, DX AA, was completed on February 25. (Petitioner's App. A-19).

9. That "The AA device [of Kirkhof] was first produced in prototype form and shortly thereafter a number of production transformers incorporating it were sold to Fisher Body." This version of Kirkhof "never gained commercial acceptance." (Petitioner's App. A-19).

10. That "In response to the failure of the AA device, Kirkhof rearranged the tap terminals so that the pairs were formed not by bridging two straight lines of

terminals, but by spanning the diameter of a circle. By September [1963], transformers incorporating the round plug-tap switch were sold successfully to Fisher Body [by Kirkhof]." (Petitioner's App. A-19).

11. That the shelving of the X project in the Fall, 1962 constituted an abandonment of the invention by Kirkhof under 35 USC § 102(g). (Petitioner's App. A-22, 23).

12. That "The most pertinent prior art is Girton '431 and the Italian and German patents to Bauer (Pet. App. A-24). This conclusion means that the Patent Office did not cite the most pertinent prior art. The presumption of validity as to the Winsand patent is diminished, though not greatly, because the best prior art is not greatly more pertinent than the cited prior art." (Petitioner's App. A-24); "The similarity between Winsand and Ultrablitz [cited by the Patent Office] is essentially of the same type as between Winsand and Bauer." (Petitioner's App. A-30).

13. That "Plaintiff's proofs that Winsand has been successful stand unrefuted. Ford has adopted as its standard a device virtually identical to Winsand, after previously using Winsand itself for some time. Fisher Body also accepted the device." (Petitioner's App. A-34).

14. That claims 4 and 5 of the Winsand patent are infringed by the accused transformer of Ford (Petitioner's App. A-37).

15. That the prior art patents asserted by Ford and Syndevco are inadequate to support a finding of invalidity of claims 4 and 5. (Petitioner's App. A-31).

These findings would lead inexorably to a conclusion of non-obviousness under the *Graham v. Deere* standard. Instead, however, the District Court concludes that claims 4 and 5 are nevertheless invalid in view of a hypothetical combination of Girton '431 and the German and Italian patents to Bauer, and repeats the conclusory litany of *A & P* and *Sakraida* (Pet. App. 34):

> "In arriving at this conclusion, I have reviewed claims 4 and 5 as 'combination patents' . . . The test for such patents is that they must produce a synergistic result; they must somehow exceed the sum of their parts. A new or surprising result must be present . . . The Winsand device functions just as expected. It produces no new result."
>
> * * *
>
> In sum, the patent in suit simply lacks the 'impalpable something' that constitutes invention."

Under the aegis of the synergistic test, the District Court found invalidity, even though it struck down the attacks on validity made by respondents Ford and Syndevco.

The Court of Appeals affirmed the District Court. But, contrary to the District Court, and the record, the Court of Appeals found that the Winsand patent was granted without the citation of "any relevant prior art" indicating the failure of the Court of Appeals to perceive that Girton '838 (Pet. App. B) was in fact considered and cited by the Patent Office.

Petitioner has pointed out repeatedly in the post-trial proceedings below that the Winsand transformer accomplished with seven parts what the District Court found can somehow be accomplished with a com-

bination of over seventeen Girton '431 parts and twelve Bauer parts.

Unlike Bauer and Girton '431, the transformer of the Winsand patent has *no* moving parts.

In Winsand, there are five tap terminals which cooperate with the plug and cover plate — a total of seven parts — to determine the output voltage of the transformer.

Conservatively, seventeen parts perform the same function in Girton '431.

The function of selecting input voltages in Bauer is carried out by a total of twelve parts. And Bauer discloses no elements for changing output voltage. Bauer intends that the output voltage be constant.

Assuming, arguendo, that Winsand functions no better than Girton '431, and that Bauer can be modified to function as Girton '431 and Winsand, Winsand has eliminated all moving parts, and has reduced the number of parts with respect to each of Girton '431 and Bauer.

Mr. Dilay, Ford's expert, conceded that the Bauer transformer is not suitable for resistance welding, even if modified to have a variable output voltage.

The desirability of eliminating the numerous parts of the Girton '431 tap switch mechanism is not contested. The need to do this was recognized by Mr. Sarafian and Mr. Emaus at the outset of the Kirkhof project. Obviously, the need has been recognized by Ford.

To the extent that any invention can be said to "exceed the sum of its parts," Winsand, in accomplishing with seven parts what Bauer (modified) does with twelve and

Girton '431 does with seventeen "exceeds the sum of its parts."

Throughout the proceedings below, neither the District Court, respondents, nor the Court of Appeals have seen fit or been able to respond to this analysis, and have not attempted to point out what is meant by the requirement that the invention "exceeds the sum of its parts."

III.

THE BURDEN ON THE FEDERAL COURTS, LITIGANTS, AND THE PUBLIC RESULTING FROM THE DISARRAY CAUSED BY THE CONFLICTS OVER THE "SYNERGISTIC" TEST MAKES THIS AN ISSUE OF PARAMOUNT PUBLIC IMPORTANCE REQUIRING RESOLUTION BY THIS COURT

The confusion and conflicts in the courts brought about by the synergistic test has substantially increased the costs of patent litigation — litigation that was complex enough prior to *Sakraida*. In *Blonder-Tongue Lab. Inc. v. University Of Illinois Foundation*, 402 U.S. 313, 334 (1971), this Court made note of "the acknowledged fact that patent litigation is a very costly process." The synergism controversy adds to the complexity of every stage of patent litigation. Almost every case involves pre-trial discovery as to whether an invention is a "combination" so as to be subjected to the synergistic test of *Sakraida* as opposed to the obviousness test of 35 USC 103 and *Graham v. Deere*. Inventions are dissected into their basic elements so that the accused infringer can triumphantly point out that each of the elements is previously known outside the combination. The parties then enter into a costly and time consuming

intellectual exercise, having little, if anything, to do with the merits of the invention under consideration, as to whether the combination exceeds "the sum of their parts," and has that "impalpable something," and whether "two and two have been added together, and still they make only four." It was thought that the enactment of 35 USC § 103 in 1952 laid the *A & P* test to rest. The synergistic test is non-statutory and non-workable. It has imposed an undue burden on law and commerce. The synergistic test frustrates law and commerce in denying even a modicum of certainty as to the outcome of patent litigation. That very uncertainty increases the amount of litigation — the subjective nature of the synergistic test encourages accused infringers to roll the dice, regardless of the merits of an invention, on the odds that a federal judge can be persuaded that the invention is to a "combination" and "even though a good idea" (Petitioner's App. A-36) strike down the patent with the conclusory litany of no "synergistic" result — two plus two does not equal more than four; ergo, the patent is invalid

There is a clear conflict among the regional Courts of Appeals. There are even conflicts among different panels of the same Court of Appeals as witnessed by the *Sarkisian* case in the Ninth Circuit.

The regional Courts of Appeals have numerous patent cases in their dockets. The new Court of Appeals for the federal circuit (CAFC) will come into being October 1, 1982 with appellate jurisdiction over most patent cases. The conflicts and confusion over the synergism issue cries out for resolution by this Court.

The Winsand invention is deserving of analysis on the merits under the *Graham v. Deere* test — not the capricious "synergistic" test. The conclusory, non-

analytical finding of invalidity of the Winsand patent will produce a chilling effect on innovation among suppliers to the U.S. automotive industry.

The non-statutory synergistic test frustrates the underlying policy of the patent system, enthusiastically endorsed by statesmen such as Abraham Lincoln: "The patent system . . . added the fuel of interest to the fire of genius." The synergistic test places a capricious burden on the patent system not intended by Congress when it enacted the 1952 Patent Act under the Constitutional mandate of Article I, § 8.

CONCLUSION

As strikingly demonstrated by the case at bar, industry and commerce cannot seek guidance from the patent laws as written by congress so long as the synergistic test is extant. Not only was § 103 circumvented by the courts below, petitioner was not able to rely upon the plain language of § 282.

The Sixth Circuit's synergistic test is stated as follows in *American Seating Co. v. National Seating Co.*, 586 F.2d 611, 620-621 (6th Cir. 1978):

> "In Kearney & Trecker Corp. v. Cincinnati Milicron, Inc., supra, 562 F.2d at 370, this Court, speaking through Circuit Judge Lively, recently defined synergism as follows:
>
> > The synergistic test is met when a combination of elements produces an effect which is 'greater than the sum of the several effects taken separately.'. . . There must be an 'impalpable something' in the combination itself which consists of previously known elements. . ."

No human being can apply the "synergistic" test with any coherence or consistency. It is inherently whimsical. It is non-statutory; as such it conflicts with the language of recent decisions of this Court, *Diamond v. Diehr*, 450 U.S. 175; 101 S.Ct. 1048, 1054 (1981):

> "In cases of statutory construction, we begin with the language of the statute. Unless otherwise defined, 'words will be interpreted as taking their ordinary, contemporary, common meaning' [citation omitted] and, in dealing with the patent laws, we have more than once cautioned that 'courts *"should not read into the patent laws limitations and conditions which a legislature has not expressed."* (emphasis added)

For the reasons set forth above, a Writ of Certiorari should be issued to review the judgment of the United States Court of Appeals for the Sixth Circuit.

Respectfully submitted,

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APPENDIX A

OPINION

District Court, E.D. Michigan, S. Div.)

(Dollar Electric Company v. Syndevco, Inc, et al. Nos. 7-70057 and 8-71705.)

Decided Sept. 10, 1979)

Plaintiff, Dollar Electric Company, owns U.S. Patent No. 3,281,747 (hereafter patents will be referred to by their last three digits), issued October 25, 1966 to Amos Winsand, one of the stockholders of Dollar. Defendant Syndevco, Inc. is an automotive supplier located in Southfield, Michigan which supplies and holds Ford harmless with respect to a device alleged to infringe the '747 patent. Jurisdiction exists under 28 U.S.C. § 1338; defendants concede proper venue and a trial by jury was waived. What follows constitute my findings of fact and conclusions of law.

I. Background Facts

The patent in suit is for a device to change the output voltages from a transformer. Such a device may have many uses, but the one most pertinent to this case is in the field of resistance welding.

Resistance welding consists of fusing two sheets of metal by simultaneously pinching them together between two copper electrodes and passing a large electric current through the pinch-point. The resistance of the metal to the current generates heat which accomplishes the weld. The currents used are in the neighborhood of 15,000 to 40,000 amperes, carried at four to seven volts.

High amperage, low voltage currents are not available through public utilities because current transmission at such low voltages is inefficient. Thus, to perform resistance welding the manufacturer must "transform" the 440 volt, 150 ampere current which is available. This is done with a transformer. A transformer operates on principles of electrical induction, according to Maxwell's equations. It consists of a pair of coiled conductors placed adjacent to one another. Current passing through the "primary" "induces" a current into the "secondary" coil. The relationship of input to output current varies depending on, inter alia, the ratio of primary to secondary "turns" in the coils. By changing the turn ratio, the output voltage can be changed. This is the genesis of the instant patent.

One transformer will produce different outputs if the primary is "tapped," that is, if instead of passing through the entire primary, current passes through only part of it. This varies the effective turn ratio. Connections to the primary to enable this to occur are "taps." A tapped transformer can produce several outputs by a switch of the tap connection.

Resistance welding transformers are commonly of the "package" variety; the two coils are imbedded in an epoxy compound which is, in turn, encased in a sturdy metal housing. Often water from an external source circulates through the transformer housing to cool it. Resistance welding transformers generate substantial quantities of heat when in operation.

One transformer can produce the current necessary to supply one set of electrodes. The combination of a transformer and a pair of electrodes is called a "welding gun." Welding guns may be mounted side by side on racks to produce a series of closely spaced spot welds.

The closeness of the welds depends mainly on the width of the transformers, which may vary between 4 and 9 inches.

For maximum utility, a package transformer is tapped and possessed of some means to change the tap settings. This is required because different types of metal bond better with varying amounts of heat generated by different currents.

Prior to the early 1960's, tap settings were changed by means of a "tap switch." This is a rotary device that changes the tap setting by rotating a current carrying voltage source lead into contact with one of several tap terminals arranged in a semi-circular array around the axis of the tap rotor. Early tap switches were unreliable because the voltage carrying conductor could be inadvertently positioned between tap terminals, causing a short. Moreover, the inadvertent changing of the tap setting presented problems. This was cured by the invention of a snap-locking mechanism that made it very difficult to mis-position the tap switch or unknowingly change its setting. Plaintiff's Trial Exhibit 2 ("PTX 2") (Stevens patent '520)

At about the same time the Stevens device came into use, another advance occurred: the quick disconnect primary plug, Girton Reissue patent '838. PTX 124A. Prior to the disconnect plug, the transformer was "hard-wired" to the voltage source. When the transformer failed, it took considerable time to disconnect it and install a new one. This "down time" cost manufacturers time and money. The Girton device allowed a failed transformer to be quickly replaced. In 1957, Girton combined the ideas of a tap switch and a disconnect plug and received U.S. Patent '431. PTX 154.

Completing this discussion, a word should be said about the environment resistance welding transformers must withstand. It is very dirty. This is due to the spark splatter that is produced every time a weld is made, PTX 5, and to the dirt and grease present around any heavy machinery. Another problem is water leakage from the cooling systems. Finally, there is a danger to workers if the "live" tap terminals or voltage source leads are exposed to contact. These factors make it imperative that the tap switch mechanism be totally enclosed. This feature is shown by Girton '431 which discloses a sealed enclosure for the tap switch.

In the late 1950's the automobile industry began to use galvanized metal in automobile bodies. Galvanized metal requires more current to weld than ungalvanized metal. Such necessary large currents when transmitted at low voltages cause power loss. The previously mild problem of power loss between the transformer and the electrodes thus became more acute. Accordingly, there was a need for a more powerful transformer that could be positioned closer to the welding electrodes. This mandated more efficient, compact construction of transformers. One component of the desire for compactness was the desire for a narrow transformer.[1]

In early 1962, Herman Klingelhofer of the Fisher Body Division of General Motors asked Amos Winsand if he could develop a transformer to meet these dual needs of a narrow transformer whose tap setting could be changed. The chronology of Winsand's solution will be detailed later. The "multi-tap plug" Winsand developed and patented provided a solution to this problem.

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[1] In addition to the drive for compactness, there was a lesser need for a more reliable, inexpensive construction for the tap switch. This was part of the motivation for the Winsand patent. The interaction of this need with the need for a narrow transformer has created some difficulty in analyzing the instant lawsuit. For now it is only important to note the parallel needs that existed.

II. The Winsand Device

Winsand '747 is, basically, a combination of a transformer with a quick disconnect plug that has been modified to perform the function of the tap switch. Its design enables the construction of a narrow transformer with an adjustable output voltage.

The Patent Office after considerable file activity allowed Winsand five claims.[2] The claims describe two embodiments of the combined tap switch quick disconnect plug. Claim 1 sets forth the essence of the invention. It recites nine basic elements. They are listed here. See Trial Transcript at 342-351. ("TT")

(1) A transformer having a primary and a secondary

(2) A plurality of taps connected at spaced points to the primary

(3) The taps are connected to tap terminals, which are insulated from one another

(4) A primary disconnect plug with a pair of spaced female terminal receptacles connected to a voltage source

(5) The tap terminals are arranged so that there are two or more pairs created, the pairs being spaced apart the same distance as the plug receptacles

(6) Neither terminal of the first pair of terminals is a member of another pair

(7) A plug that can be connected to energize the primary by fitting into removable contact with the terminals

(8) The pairs of tap terminals are spaced so that the plug can bridge various pairs of them

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[2] They are set forth in full in Appendix "A".

(9) The primary disconnect plug functions as a tap switch

Claims 2 and 4 more specifically describe a circular version of the Claim 1 device, without specifically referring to Claim 1. In Claim 2, it is specified that the pairs of tap terminals called for by (5) above be achieved by placing one common tap terminal in the center of a circular array of other tap terminals. Thus, by rotating a plug around the center tap, various pairs are produced, with various corresponding output voltages. This, of course, does not meet the requirement (6) in Claim 1 that "neither terminal of said first pair of terminals is a member of another pair;" the center tap terminal is common to every pair.

Claim 4 essentially repeats Claim 2 but recites the addition of a housing surrounding the tap terminals, with an opening through which the primary plug passes. The plug is fitted with a cover plate which, after the plug is engaged, may be fastened to the housing, totally enclosing the terminal assembly. Claim 4 is represented pictorially by PTX 19, Appendix "B." (The labels are mine)

Claim 3 is simply another arrangement of the tap terminals. There are six terminals, arranged in three horizontal rows of two each. The top and bottom rows are individual tap terminals, connected at varying points electrically to the primary coil. The two middle terminals are shorted together and are both connected to the opposite end of the primary from the four taps already described. By positioning the plug across the four pairs of terminals formed by the top and bottom rows, four output voltages may be obtained.

Claim 5 recites Claim 3 with the addition of a housing surrounding the terminals and a cover plate behind the

plug. With the addition of a gasket, the cover plate completely seals the terminal and plug construction from the outside. Claim 5 is depicted pictorially in PTX 17, Appendix "C." (Again, the labels are mine)

Winsand claims that the Syndevco device infringes all five claims.[3] His expert witness, Townsend Beaman, said he was inclined to rely most heavily on Claims 4 and 5, however.

Defendants raise a host of defenses, arguing all the claims of the patent are not valid and that even if they are, the Syndevco plug and tap switch does not infringe any of them. More specifically, Defendants contend as follows:

(1) Claim 1 is invalid under 35 U.S.C. § 112 because it fails accurately to describe either embodiment of the Winsand invention as described in the specification;

(2) Claim 1 is invalid for overclaiming the invention;

(3) Claims 1 and 2 are invalid under 35 U.S.C. § 102(g);

(4) Claim 2 is invalid under 35 U.S.C. § 102(a);

(5) All of the claims are invalid under 35 U.S.C. § 103.

With respect to Claim 1, Defendants say that neither embodiment meets all the requirements of Claim 1. The rectangular embodiment does not have "a plurality of taps . . . said tap respectively having spaced tap

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[3] Throughout the trial, Plaintiff has failed to distinguish between the different claims resulting in some confusion in the evidence and briefs. In this opinion I will treat the claims separately except where reference to "the Winsand device" as a whole will not be imprecise in any material fashion.

terminals *insulated from one another.*" (emphasis supplied) The two middle terminals are not insulated from each other. Thus, Defendants argue that the claim fails to particularly point out and distinctly claim the subject matter of the invention. 35 U.S.C. § 112 This contention is rejected.

First, though the language cited from the claim could have been more precise, it is susceptible of interpretation in harmony with the rectangular embodiment. The "insulated from one another" requirement can reasonably be read to mean only that the *pairs of terminals* are insulated from one another, not that *all* of the terminals be insulated from *all* others. There is testimony on the record to support the reasonableness of this reading. Moreover, it is in harmony with the policy to read claims in conjunction with the specification. The specification of the rectangular embodiment shows clearly that the two center tap terminals are connected but that the terminals in the top and bottom rows are insulated from any other terminal. See Fig. 8 of Winsand '747. Application of Cormany, 476 F2d 998, 1001, 177 USPQ 450, 452-453 (CCPA 1973) Interpreting the instant claim in light of the purpose the invention is to accomplish, it is evident that the challenged defect in the language is more like a clerical error than a substantial element of the invention. Autogiro Co. of America v United States, 384 F2d 391, 155 USPQ 697 (Ct. Cl. 1967).

The fact that the limitation as to the taps being respectively insulated from one another was inserted to distinguish it from Maberry "559 does not change this result. The feature in Maberry sought to be avoided was the fact that there, in each position of the plug, two electrically connected terminals were active. In Winsand

it was sought to show that the working terminals in any given pair were always insulated. TT 211-213.

[1] As to the assertion that the specification fails to support the "insulated from one another" feature, this too is rejected. As noted, Fig. 8 shows that the two center terminals are connected electrically. Moreover, in Column 3, Lines 29-34, the specification explains that both center tap terminals, 142 and 143, are secured to tap 124, which clearly shows that they are not insulated from one another as the claim mistakenly recites. The purpose of the requirement that the claim be supported by the specification is to put the public on notice as to the limits of the claim. I find that no one of ordinary skill in the art would be confused as to the scope of the patent by the ambiguity in the claim. Kaiser Industries Corp. *v* McLouth Steel, Corp., 257 F Supp 372, 428, 150 USPQ 239, 283-284 (E.D. Mich), aff'd 400 F2d 36, 158 USPQ 565 (6th Cir. 1966), cert. denied 393 U.S. 1119, 160 USPQ 832 (1969). One would see that the terminals need only be insulated as between those forming operative pairs.

Defendants also say that the requirement in Claim 1 that "neither terminal of said first pair" of terminals be a terminal of any other pair is not met by the round embodiment. This is true because in the round version, the center terminal is common to all pairs. However, in the course of the trial, Plaintiff's witnesses said that this language had little significance and that Claim 1 meant the same thing with the language or without it. TT 237. Defendants urge that the language is immaterial in claiming that Bauer '072 anticipates Claim 1 and in urging that it is an obvious variation on Owen '260. Thus, the parties seem to argue that the language is not important. It would be illogical to allow Defendants to exalt this phrase to invalidate Claim 1 under § 112, but

minimize its importance in showing invalidity under § 103.

Defendants next urge Claim 1 is void for "overclaiming" the invention. This contention is, essentially, that even if the plug-tap switch itself is patentable, Claim 1 recites as elements of the invention many old and unpatentable devices, such as a transformer, taps and a primary disconnect plug. I find this claim persuasive and thus invalidate Claim 1. Without extended discussion, it is evident that the words of Judge McAllister are pertinent here.

> [W]e are of the opinion that the claims of the patent in suit *are invalid* for the reason that the patentees do not particularly point out and distinctly claim the part, improvement, or combination which they claim as their invention or discovery, as required by the controlling statute . . ." Patrol Valve Co. v Robertshaw-Fulton Controls Co., 210 F2d 146, at 150, 100 USPQ 239, at 242 (6th Cir. 1954), cited in Holtensson v V-M Corporation, 325 F2d 109, 124, 139 USPQ 401, 412-413 (6th Cir. 1963), cert. denied 377 U.S. 966, 141 USPQ 950 (1964).

The language in Claim 1 gives no indication as to what is claimed, among all of the old elements, to be new. I would not be inclined to so hold except for the fact that during the trial of this case, in argument and in testimony, Plaintiff consistently referred to and regarded his invention as a *patented transformer*, not simply a multi-tap disconnect plug. Defendants have not asserted overclaiming as a defense to any other claim. Perhaps this is because the modifications to the transformer housing contemplated thereby or the more specific tap terminal arrangements more specifically disclose the

invention. In any event, I have no need to pass on the applicability of this defense to the other claims.

Having voided Claim 1 on overclaiming grounds, it is still advisable to discuss it in connection with the obviousness defense which, raised as to all claims, formed the vast bulk of the proofs put forth at trial.

III. The Graham v. Deere Inquiries

[2] To be patentable an invention must be useful, novel, and meet the nonobviousness test of 35 U.S.C. § 103:

> A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior act are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains . . .

In Graham v John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court held that in applying the nonobviousness condition on patentability, the courts must make three basic formal inquiries: (1) the scope and content of the prior act; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art.

A. The Scope and Content of Prior Art

1. The "Art" to Which Winsand '747 Pertains

[3] Under Graham, the trial court must determine: (1) the art to which the patent in suit pertains, and (2) its content. The parties have not emphasized the dual nature of this inquiry, but the distinction is important.

See, e.g., 2 D. Chisum Patents, § 5.03[1] (1979) (hereafter "— Chisum at — ")

Plaintiff maintains his patent is limited to the "resistance welding art," being another in a series of small but discrete steps following the invention by Taylor of small package transformer welding guns in 1958. Plaintiffs seeks, by this limitation, to narrow the scope of the pertinent prior art and avoid the impact those references would have upon the obviousness determination. I find that the references sought to be avoided would not be avoided by limiting the pertinent art as Plaintiff contends. However, by denying the limitation, that conclusion is superfluous.

[4, 5] The pertinent art should not always be defined by reference to the group which will use the purported invention. It should be defined by reference to the group possessing the skills to solve the sort of problems which confronted the inventor. See, e.g. Kitch, Graham v John Deere Co.: New Standards for Patents, 1966 Sup Ct Rev 336.8 (1966). In this case, the relevant art is the electrical arts in general, with emphasis on means of voltage transformation and multiple circuit reconnections. Obviously, no specific academic or occupational discipline functions solely in this area, these skills being nearly universal among those skilled in a host of fields, yet it is as near as I can come to a definition that will adopt what Kitch calls the "problem-solving" approach as opposed to the "product-function" approach urged by Plaintiff. 2 Chisum at § 5.03[1]

[6] My definition of the pertinent art requires a high amount of cross-disciplinary insight on the part of putative inventors. This is appropriate for at least two reasons. First, as technology burgeons "it is simply evenhanded application to require that those persons

granted the benefit of a patent monopoly be charged with an awareness of "the advances made in other fields. Graham, 383 U.S. at 19, 148 USPQ at 467. Second, the principles involved in the Winsand invention are elemental. They are used in a host of areas. They transcend narrowly proscribed industrial classifications that bear no relation to the policies behind the patent law. In his deposition Plaintiff himself admitted that in making his invention, he should have looked to other areas which had addressed similar problems, but did not. Winsand Deposition at 94. He also conceded the applicability of his invention to other areas.

The cases support the "problem-solving" approach. 2 Chisum at § 5.03[1]; Janex Corporation v Bradley Time, 460 F Supp 383, 388, 199 USPQ 525, 529-530 (S.D. N.Y. 1978). For example, in Calmar[4] the Supreme Court adopted it by characterizing the problem facing the inventor as one of "mechanical closure" rather than of "insecticide" as the inventor urged. 383 U.S. at 35 A more enlightening example is Metaframe Corporation v Biozonics Corporation, 352 F Supp 1006, 1012-1013, 176 USPQ 237, 241-242 (D. Mass. 1972) There the court held invalid a patent which consisted of a power transfer from a [*sic*] electric motor to a plastic impeller blade by means of two doughnut shaped magnets, which were separated by a layer of plastic to keep water from the motor. The plaintiff applied this principle of power transfer to an aquarium filter, claiming the aquarium field was the relevant art. The court disagreed, stating that the obviousness test should be applied to "persons having ordinary skill in the basic mechancial or scientific field,

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[4] Calmar, Inc. v. Cook Chemical Co., a companion case to Graham, reported at 383 U.S. 1, 148 USPQ 459 (1966).

such as fluid dynamics," even though people with such skills might not ordinarily be called upon to exercise them in the aquarium field. The analogy to this case is clear: people in the resistance welding area might not ordinarily be called upon to exercise their knowledge of the fundamental mechanical and electrical principles involved in a multi-tap plug, but do possess them. Plaintiff's error is in characterizing the essential problem confronted by Winsand as one *peculiar* to resistance welding rather than to a wide range of disciplines. Just as the problem in In re Application of Grout, 377 F2d 1019, 1022, 153 USPQ 742, 744-745 (C.C.P.A. 1967) called for the "talents of one skilled in the art of fasteners" even though the problem solved "would be encountered by a beekeeper," the problem confronting Winsand called for the talents of one skilled in voltage transformations and means to change circuits, rather than the skills of one accustomed to solving only resistance welding problems. See, e.g. Systmatic Tool, etc. v. Walter Kidde & Co., Inc., 555 F2d 342, 349, 193 USPQ 587, 593 (3d Cir.), cert. denied 434 U.S. 857, 195 USPQ 466 (1977).[5]

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[5] My holding in this regard might be clarified by observing that Plaintiff's error is not so much that he uses the "user" rather than the "problem solver" in resistance welding as the reference point, but that he uses a "resistance welding problem solver" rather than an "electrically skilled" or "voltage transformations" problem solver. Although the talents of the former are most likely to encounter *this* problem, this likelihood is more a fortuitous circumstance than a cross-disciplinary rigidity that the patent law should encourage. The benefits of bending to accommodate industrial reality are sometimes subordinate to the countervailing policy of encouraging cross-disciplinary awareness.

2. The Content of the Pertinent Prior Act

[7] The second portion of the initial Graham inquiry is to ascertain the *content* of the prior art. The task is to ascertain the teachings of prior patents and other references described in 35 U.S.C. § 102 in the art to which the patent in suit pertains at the time of the invention. Ordinarily, this is accomplished by evaluating prior references in the art in question and references in such closely related fields "as a person with ordinary skill in the art would be expected to examine for a solution to the problem." 2 Chisum at § 5.03[1] These closely related fields are called "analagous arts." By defining the pertinent art as I have, the problem of determining analogous arts has been largely obviated; my definition of the pertinent art encompasses all the references upon which the Defendants rely for their defense of obviousness, i.e., the patents cited by Defendants in ¶8 of the Final Joint Pre-Trial Statement.[6]

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[6] In the alternative, I find that the content of the prior art for the patent in suit would be the same even if I adopted Plaintiff's definition of the relevant art as "resistance welding." This is because under the prevailing definition, all of the references cited by defendants would be from analogous arts. An ordinarily skilled resistance welding designer would or should examine other fields such as electrical connectors (Cage '492), electric circuit controls (Owen '260), and motor connectors (Shere '578) in seeking a solution to a problem involving producing different secondary voltages from a constant primary voltage. See, Winsand Deposition at 94. Recent cases from this circuit support this conclusion. The Sixth Circuit takes a fairly broad view of what constitutes analogous art. See, e.g. Tapco Products Co. v. Van Mark Prods. Corp., 446 F.2d 420, 427, 170 USPQ 550, 555 (6th Cir.), cert denied 404 U.S. 986, 172 USPQ 1 (1971); Skega Aktiebolag v. F. Goodrich Co., 420 F.2d 1358, 164 USPQ 333 (6th Cir.), cert. denied 400 U.S. 825, 167 USPQ 257 (1970); Buffalo-Springfield Roller Co. v. Galion Iron Works Mfg. Co., 215 F.2d 686, 103 USPQ 72 (6th Cir. 1954). See also Automatic Arc Welding Co. v. A. O. Smith Corp., 60 F.2d 740, 14 USPQ 127 (7th Cir. 1932); Dann v. Johnston, 425 U.S. 219, 189 USPQ 257 (1976).

One final issue concerning the content of the prior art pertains to the § 102(g) defense raised as to Claims 1 and 2. Section 102(g) provides:

> [A person shall be entitled to a patent unless — . . .] (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned . . . it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

[8] Under this section, an invention which is conceived prior to the patentee's conception but is not reduced to practice until after the patentee reduces his invention to practice may completely invalidate patentee's invention or be a part of the prior art considered in the obviousness inquiry if, after conception, due diligence in reducing the prior invention to practice was exercised by the prior inventor.[7] Defendants claim that William Emaus and Deitrich Roth, among others, at Kirkhof Manufacturing Co. invented Winsand's device (or at least Claims 1 and 2) before he did. For reasons that follow, this contention is rejected.

The chronology of developments at Kirkhof upon which Defendants rely may be summarized as follows: In

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[7] See, e.g., 2 Chisum at § 5.03[3][c]: "Prior invention should constitute prior art as of the date of invention except where the prior inventor is found to have abandoned, concealed or suppressed the invention."

1960, William Emaus was the manager of the transformer division at Kirkhof. Toward the end of 1960 he hit upon the notion that the disconnect plug used by Girton '431 might be modified to perform the function of the tap terminals. Although this may have been suggested by Karl Sarafian, a production engineer and development liason at Fisher Body Division of General Motors, Emaus claims the idea as his own. The virtues of such an arrangment were explained by Sarafian to be the elimination of moving parts from the tap switch mechanism and an increased reliability that would result.

On December 28, 1960 Emaus wrote Sarafian a letter stating that he would explore the feasibility of such a device. Defendants' Deposition Exhibit ("DDX") LL.

More or less contemporaneous with the auto industry's desire for a combination tap switch and disconnect plug, there was also a growing desire for smaller transformers able to perform the same work as the larger ones then in use. This, in turn, generated a need for voltage selecting devices smaller than the tap switches then available. Of this, more will be said later.

Emaus' idea for a combination disconnect plug and tap switch was described in DDX HH. It is virtually identical to Winsand's invention as set forth in Claims 1 and 2 and according to the testimony of Emaus, it reads directly on those claims. However, no contemporaneous drawing or model could be produced. Indeed, development of the idea seems to have lapsed entirely until early 1962 when Emaus said a prototype of the HH device was built. The time of the building of HH could not be placed with any accuracy, nor could it be produced.

The next piece of concrete evidence is DDX UU3-A, a page from Sarafian's log book dated June 11, 1962 which refers to a narrow transformer — about 4" — with a combination plug and tap switch. Sarafian was unable to recall its design, but it appears to have corresponded to a later development represented by the drawing that is DDX AA. The trial of the UU3A device disappears for a time after the June 11 entry.

Meanwhile, development of the HH idea was proceeding, albeit slowly. Sometime in the spring of 1962, probably in June, Emaus gave instructions to Deitrich Roth, Kirkhof designer, to make a drawing of the HH device, elaborating on some of the features present in the HH prototype. This drawing was completed on July 30, 1962. DDXX. After its completion, Roth spent several months with a detailer, Hildegard Babson, preparing a series of detailed drawings of the X device, DDX Z-1-Z-15. These were completed in late September of 1962. After their completion, the X project was "shelved," in Roth's words. He believed that the X idea was simply not an improvement over Girton '431. Although a prototype of X was constructed, it was never tested and never put into production.

Early in 1963, the desire for a narrow transformer reasserted itself, after apparently having lain idle since June 11, 1962. Emaus asked Roth to design what I have called the AA device. It consists of a plug and tap switch combination in which there are four pairs of tap terminals arranged in a vertical linear array which are spanned by a disconnect plug used to change the tap setting. The AA device, as described, reads word for word on claim one of Winsand, except that electrically speaking, it does not meet what all agree is the fairly insignificant limitation of neither terminal of the first

pair being a member of the second or subsequent pairs. Emaus appears to have instructed Roth to begin work on the drawing about January 10, 1963, as the drawing was completed on February 25. DDX AA.

The AA device was first produced in prototype form and shortly thereafter a number of production transformers incoporating it were sold to Fisher Body. The in-line arrangement of tap terminals never gained commercial acceptance. Fisher Body felt that the cover plate behind the plug, being a loose part, presented problems from a maintenance standpoint.

In response to the failure of the AA device, Kikhof rearranged the tap terminals so that the pairs were formed not by bridging two straight lines of terminals, but by spanning the diameter of a circle. By September, transformers incorporating the round plug-tap switch were sold successfully to Fisher. See DDX CC, DD, EE and FF.

Meanwhile at Dollar, the following events transpired: In March or April of 1962, Herman Klingelhofer, a Fisher Body production engineer whose duties roughly paralleled those of Sarafian, called on Winsand at Dollar. He requested that Dollar try to develop a narrow transformer was made [*sic*] develop a narrow transformer that could produce several output voltages. A narrow transformer was made easily. The variable output feature proved more troublesome due to the unavailability of narrow tap switches. Soon, Winsand "struck upon the idea of using the plug with the various groups of terminals in adjusting the secondary voltage." T.T. 68. Working in his shop he fashioned a prototype of the device described in Claim 5 of his patent (narrow rectangular plug and tap switch combination). It is not clear just when this occurred; it is only known that it was

after late March but before June 18 when Winsand made a drawing, PTX 26, showing the device in detail.

Shortly thereafter, on July 31, 1962, Winsand drew PTX 31, a full-scale rendering of the circular device described in Claim 4.

By early July the rectangular device had been tested and very soon thereafter several were sold and shipped to Fisher Body's Marion, Indiana facility. Ford was buying it within a few months. PTX 38-42.

In sum, Kirkhof was first with the basic idea of using a disconnect plug for a tap switch. However, development and refinment of the idea lagged for well over a year until early 1962, at roughly the same time Winsand began to work on Klingelhofer's request. Whereas the idea for the combination of plug and tap switch and the narrow arrangement of the tap terminals occurred nearly simultaneously to Winsand, the two ideas emerged separately to Kirkhof.

Defendants argue that the developments at Kirkhof between 1960 and 1963 invalidates Claim 1 of Winsand under 35 U.S.C. § 102(g).

[9] To establish prior invention by a third party to invalidate a claim, the defendant must show the third party conceived the idea before the patentee and thereafter diligently worked to reduce it to practice, even though the patentee may have been the first to actually reduce the invention to practice.

[10] A good definition of conception is found in 1 Walker of Patents § 45 (2d Deller ed. 1964):

> The date of conception is the date when the inventive idea is crystalized in all of its essential attributes and becomes so clearly defined in the

> mind of the inventor as to be capable of being converted to reality and reduced to practice by the inventor or by one skilled in the art. It is settled both by practice and by case law that such exterior expression of the mind of the inventor when relating to machines and structural embodiments may be by physical exhibits either in the form of drawings or of models. In this manner, the inventor may lay the foundation of a claim to priority, provided the invention be made sufficiently plain to enable those skilled in the art to understand it, to construct it, and to operate or use it.

The conception at Kirkhof cannot accurately be placed much before DDX X, July 30, 1962. Emaus testified he had the "idea" in December of 1960. However, other than the DDX LL letter, no corroboration could be produced until much later, sometime in 1962; no prototype of either HH or X could be found.

[11] On matters of invalidity, the defendant bears the burden of proof and the risk of non-persuasion. 35 U.S.C. § 282; Schnadig Corp. v Gaines Mfg. Co., Inc., 494 F2d 383, 390, 181 USPQ 417, 421-422 (6th Cir. 1974); Westwood Chemical Inc. v Owens-Corning Fiberglass Co., 445 F2d 911, 914, 171 USPQ 1, 3-4 (6th Cir. 1971), cert. denied 405 U.S. 917, 172 USPQ 577 (1972). The evidence simply does not show Emaus "conceiving" his idea before Winsand did sometime in the period March-June 1962.

It is certainly *possible* that Emaus' conception occurred as early as 1960. He testified that even at that early date he "knew it would work." Yet in many respects, Emaus' testimony was vague. At one point he put his idea firmly in 1960 or 1961, yet later he said it could have been as

late as 1962. (Emaus Deposition at 13, 35 and 38) This is understandable in light of the nearly 20 years that has since elapsed, but it certainly does not help to place Emaus' conception. It should also be noted that though the instant device is relatively simple, there are certain details in reducing it to practice that prohibit treating the germ of an idea as equivalent to "conception." Thus, I must conclude that at most, Defendants have placed the date of Emaus' conception at a time very near Winsand's. But they have failed to *prove* that Emaus predates Winsand.

[12] I also find that even if Emaus' conception predated Winsand's, he did not use reasonable diligence in reducing his invention to practice. To show invalidity under § 102(g), the purported prior inventor must use reasonable diligence in reducing his invention to practice from a time just prior to the patentee's conception until eventual reduction to practice. If Emaus' conception is placed prior to Winsand's, his diligence becomes increasingly, more difficult to prove. For example, if conception is placed in 1960, the unexplained 15-month delay in making any progress at all on the invention would clearly be fatal to Defendants' claim. If conception is placed sometime in early 1962, the diligence issue is closer, but Defendants still could not prevail. Compared to the alacrity with which Winsand was able to reduce his idea to practice, Kirkhof's efforts appear desultory and half-hearted. For example, between conception in early 1962 and the DDX X drawing, four months elapsed. This is a very long delay in light of the simplicity of the device. And then, after the X drawing was completed, it took another two months to detail it; yet another inexcusable delay. If all of this was not enough, after completion of the Z-series drawing, the whole HH-X project was "shelved." This is an

abandonment of the invention under 35 U.S.C. § 102(g). Finally, any claim based on the efforts directed to the development of the narrow transformer would be unfounded. Nothing at all in that regard can be shown before June 11, 1962, DDX UU-3A, and thereafter, there is a six month delay until any further progress.

Having rejected Defendants' claim that the Kirkhof developments anticipate any claim of Winsand or are part of prior art for § 103 purposes, I turn to an analysis of the references that do constitute prior art.

B. The Differences Between the Best Prior Art and the Winsand Patent

[13] At the outset, I note each claim of a patent is treated as if it was a separate patent. General Motors Corp. v. Swan, 88 F.2d 876, 32 USPQ 475 (6th Cir.), cert. denied 302 U.S. 691, 37 USPQ 842 (1937); Smith Industries Intl. v. Hughes Tool Co., 396 F.2d 735, 736, 158 USPQ 243, 244 (5th Cir 1968); Jack Winter, Inc. v Koratron Co., Inc. 375 F. Supp Supp [*sic*] 1, 19, 191 USPQ 353, 360-361 (N.D. Cal. 1974). Thus, the validity of each of Winsand's five claims should be evaluated independently.

Defendants claim that Bauer's patents anticipate Claims 1 and 2. I agree. The evidence showed clearly that the Bauer patents are identical in all respects to the round version of Winsand as described in Claims 1 and 2. TT 176, 342-352. The only difference is that Bauer transforms varying input voltages into a constant output whereas Winsand delivers varying outputs from a common input. This reversal is obvious; Winsand itself would produce a single output from several inputs, if they were appropriately related. Although there might arise problems with core saturation, Winsand claims

nothing with respect to a core, nor does he mention turn ratios. The essence of Winsand's invention is disclosed in full detail by Bauer. Popeil Brothers, Inc. v. Schick Electric, Inc., 494 F.2d 162, 164-165, 181 USPQ 482, 483-485 (7th Cir. 1974); Duplan Corp v Deering Milliken Research Corp., 487 F.2d 459, 461, 179 USPQ 449, 449-450 (4th Cir. 1973), cert. denied 415 U.S. 978, 181 USPQ 129 (1974); American Seating Co. v National Seating Co., 586 F.2d 611, 617-618, 199 USPQ 257, 261-262 (6th Cir. 1978) cert. denied 47 U.S.L.W. 3683, 202 USPQ 320, 4/17/79; cf. A. J. Industries, Inc. v Dayton Steel Foundry Co., 394 F.2d 357, 359, 157 USPQ 545, 546-547 (6th Cir. 1968). The function of Bauer is to perform a variety of voltage transformations by means of a tapped transformer primary attached to tap terminals arranged in a circle around a center common tap by means of spanning the various pairs of terminals with a power source disconnect plug. Winsand Claim 2 does the exact same thing in reverse. The reverse function is substantially the same as the function itself.

As to the other claims, more extended inquiry is necessary. Note that even if Claims 1 and 2 lack novelty, they would be obvious, as are Claims 3, 4 and 5.

The prior art for the Winsand patent consists of the patents listed in Paragraph 8 of the Final Joint Pre-Trial Statement, the Girton patent '431, and the ultrablitz unit.

[14] The most pertinent prior art is Girton '431 and the Italian and German patents to Bauer. This conclusion means that the Patent Office did not cite the most pertinent prior act. The presumption of validity as to the Winsand patent is diminished, though not greatly, because the best prior art is not greatly more pertinent than the cited prior art. Clark Equipment Co. v. Keller, 570 F.2d 778, 790, 197 USPQ 209, 218-219 (8th Cir) cert.

denied 99 S Ct 96, 200 USPQ 64 (1978); Schandig Corp. v. Gaines Mfg. Co., 494 F.2d 383, 390, 181 USPQ 417, 421-422 (6th Cir. 1974); Tee-Pak, Inc. v. St. Regis Paper Co., 491 F.2d 1193, 1196, 181 USPQ 75, 77-78 (6th Cir. 1974).

At this juncture it would be well to discuss two themes that have recurred throughout this suit. The first concerns the claim that Winsand is limited to resistance welding. It is not. The phrase "resistance welding" does not appear anywhere in the claims and the specification mentions it tangentially, the preamble and in Fig. 2.

Plaintiff took great pains to show resistance welding is a distinct field from transformers in general. It spent much time showing the peculiar problems encountered therein, i.e., dirty environment, inadvertent tap changes, high currents, great heat and stress, the need for a compact and narrow transformer, the problem with down-time. Yet, the claims and specification neglect to mention any of these things. Had Winsand desired to put his transformer in the resistance welding field, it would have been easy to do so. Yet instead of mentioning all of the advantages in that field that he claims to have secured, they are all strangely absent. Compare, Girton '431, page 1, column 1.

[15] The claims of a patent should be read in light of the prior art and the file history to determine fairly the substance of the invention. United States v Adams, 383 U.S. 39, 48-49, 148 USPQ 479, 482-483 (1966). The patent discloses its applicability to resistance welding but, fairly read, the reference is by way of example, not limitation. There are a host of users for tapped transformers with tap switches or other means of changing voltages. Had Winsand desired to limit his claim, it would have been

easy to do so. He failed to so limit it. The implication is obvious that he wanted, naturally, to preserve the broadest scope possible for his claims.

In this connection, Defendants have raised the argument that Winsand is precluded from arguing his invention is limited to resistance welding by file wrapper estoppel. The following facts from the patent's prosecution are relevant. As originally drafted, none of the thirteen claims mentioned resistance welding as a limiting feature. They were initially rejected as indefinite and obvious in light of Krone '080 and Maberry '559. All thirteen claims were then cancelled and Claims 14-24 were inserted. These were rejected as obvious in light of Italian Patent '326. The claims were amended for appeal and then, after consideration, were finally rejected as obvious in light of ultrablitz. On 1/26/66 another amendment was made to insert the phrase "resistance welding" into five of the claims, in order to avoid the prior art reference of ultrablitz and Italian '326. The examiner rejected the amendment as untimely. Later, Winsand petitioned the Commissioner for entry of the amendment. However, before the Commissioner acted, Winsand's lawyer, William Griffith, spoke to the examiner on the telephone. He was told that if he would make an unrelated change in their Claim 14 (Claim 1, as allowed), the patent would issue. Thus, the petition to the Commissioner was withdrawn.

The inference arising from these facts is that after the ultrablitz unit came to light, disclosing a tapped transformer used in junction with two pairs of plugs to which the primary power plug was connected in a piece of camera equipment, Winsand thought it advisable to narrow his claims, a step he had avoided taking in response to earlier rejection. Luckily, as it turned out,

the amendment was untimely, and before it could be entered, Winsand learned the claims would be allowed without it. Seeing that the claims would be allowed in the same broad form as initially drawn, Winsand withdrew from the now unnecessary limitation.

[16] The paradigm case of file wrapper estoppel is a narrowing of a claim to avoid prior art, subsequent allowance of the claim and then an effort by the patentee to claim infringement through application of the doctrine of equivalents. The patentee is not allowed to recapture through equivalents what he surrendered to obtain his patent.

File wrapper estoppel is not limited to cases where the patentee tries to broaden his claim in an infringement suit. It also applies when the patentee tries to narrow his claims to avoid a finding of obviousness. Schriber-Schroth Co. v Cleveland Trust Co., 311 U.S. 211, 47 USPQ 345 (1940); Kaiser Industries Corp. v McLouth Steel Corp., supra, 400 F2d at 52-55, 158 USPQ at 580-583.

The essence of file wrapper estoppel is that the patentee should not take inconsistent positions concerning the same subject matter in different transactions. 4 Walker on Patents § 234 (Deller 2d ed. 1964). Thus, the question is whether Winsand took the position that his invention was not limited to resistance welding in his application. If so, he cannot urge that limitation here. I conclude that he took such a position; he cannot urge the limitation here.

[17] The court noted in Kaiser that it is difficult to show the [*sic*] absence of a limitation implies a broad claim. 400 F2d at 55, n. 17, 158 USPQ at 582-583 n. 17. However, as the court said, if a limitation is abandoned,

then the implication does arise. As to what constitutes an abandonment, the court said "abandonment is established if a phrase used in an abandoned or rejected claim is not used in a later accepted claim." 400 F2d at 55, 158 USPQ at 582-583. It does not matter that the Patent Office never took action on the amended claims, Id., at 54, 158 USPQ at 581-582, therefore, I conclude it does not matter that they were never actually part of the claims before the Patent Office. Viewed in the context of the application as a whole, it is evident that the limitation was inserted as a last resort. When it became apparent it was unnecessary, it was quickly withdrawn. Winsand is estopped to claim his patent is limited to resistance welding. Additionally, the patent would not be so limited without the estoppel.

The second "recurring theme" in this suit is Winsand's attempt to rely on undisclosed advantages of his patent to show the extent to which it is an advance over prior art. The most important example of this is his claim that the rectangular tap terminal arrangement allows the construction of a narrow transformer. This is, perhaps, the most important feature of his patented device; it was its genesis. But there is no mention *at all* of this advantage anywhere in the patent or the file wrapper. Additionally, Winsand claims the transformer is limited to resistance welding, yet nothing in the specification relates to the sturdy construction, clearance spaces or insulating materials necessary to make a transformer a resistance welding transformer. I conclude that Winsand cannot rely on these undisclosed advantages to sustain the validity of his patent.

[18] In American Seating Co. v National Seating Co., supra, the court faced a similar problem with respect to a bus seat base alleged to improve the crashworthiness of

the seat itself. The court refused to consider this function in its claim to a synergistic effect because "[t]his function [was] completely omitted in the patent's specifications. No argument as to improved crashworthiness was raised before the patent office." Citing Graham, the court noted that "[i]f this were so vital an element in the functioning of the apparatus, it is strange that all mention of it was omitted." Although the undisclosed advantages of Winsand are probably not the result of an after-thought by an astute patent lawyer, as the court seemed to feel was the case in American Seating, there are certainly indications that the advantages were deliberately omitted from the patent. This seems to present an equally strong reason for refusing to give effect to those features. As stated in Robintech, Inc. v Chemidus Wavin, Lts., 198 USPQ 466 (D.D.C. 1978) "advantages must be recited in the claims [if they are to be relied upon] for the purpose of establishing patentability. Inherent attributes which are not in the claims may not be relied upon by the patentee to distinguish the claims of the patent over the prior art."

With these two fundamental questions behind me, the analysis of the differences between Winsand and the most pertinent prior art may proceed.

Each of the nine significant elements of Claim 1 is met by Bauer. The only difference is that Bauer converts several input voltages into a single output, whereas Winsand does the opposite. There would be differences between the German Bauer patent, designed for cinema equipment, and a version of Winsand designed for resistance welding. However, the differences would be as to size, materials, and most important, turn ratios. The Winsand device is a construction of Bauer with the appropriate turn ratios to transform 440 volt input

current into output currents on the order of 3 to 7 volts, whereas Bauer transforms currents between 110 and 220 volts into a constant output. But, note, the differences exist as to features of Winsand that are not mentioned in the patent. Precisely the same analysis applies to Claim 2. In fact, the similarity is even more pronounced because both patents disclose a circular array of tap terminals around a common central tap terminal. The similarity between Winsand and ultrablitz is essentially of the same type as between Winsand and Bauer. Ultrablitz discloses only two pairs of terminals in a linear array as compared to Winsand's circular array, but this is the only difference. The principles of devices like Owen '260 are also applicable. It is possible to substitute a transformer's taps for the plurality of resistance heating circuits disclosed in Owen. If this was done, Owen would perform the Winsand function. The testimony also shows that Cage could be modified in a manner contemplated by the inventor to perform the function of both Claim 1 and Claim 2 of Winsand. Cage explicitly discloses its application to transformer taps.

Claim 4 is, electrically, susceptible of the same analysis set forth above. However, it discloses a housing and a cover plate that encloses the tap terminals. Claim 4 should best be regarded as a combination of Bauer and the housing disclosed by Girton '431. The cover plate which, in Bauer, is designed to ensure the proper tap setting must be either removed and replaced by a Girton-type housing, or modified to obtain the same result. The Cage plug assembly performs a shielding function but would have to be modified to perform the enclosure function disclosed by Winsand. Cage lacks fasteners and a gasket. The ultrablitz does not disclose either a shield or housing function, nor do the other prior art patents not cited by the Patent Office.

Claim 4 differs from Girton 431 in that the primary disconnect plug has been modified to accommodate the tap terminals inside the Girton switch housing. They have been rearranged and stood on end to accommodate the plug, which has been equipped with a larger version of the cover plate behind Girton's plug. From a functional standpoint, several moving parts in the tap switch have been eliminated and the danger of inadvertent changing of the tap setting is lessened. The results of Girton and Winsand are the same; both transform 440 volt, 150 amp input current into three or more very low voltage, high amperage output currents. The functional integration of the tap switch mechanism and the transformer is a notable similarity between Girton and Winsand not disclosed by ultrablitz, Cage or the Owen-type heating circuit multiple connectors. Both Girton and Winsand disclose their application to resistance welding, though Girton is limited thereto, whereas Winsand is not.

Claims 3 and 5 of Winsand are essentially rearrangements of the tap terminals of Claims 2 and 4 into a rectangle: the center tap terminal has been split into two which are shorted together and the terminals on the periphery of the circle have been moved so that they form two pairs above and below the split center terminal. This rectangular array is not disclosed by any prior art reference, though Cage shows both a circular and rectangular array of tap terminals in a repositionable plug. Claim 5's requirement of a housing calls into play the same reliance on Girton '431 as Claim 4 did.

C. The Level of Ordinary Skill in the Art

The direct evidence as to the level of ordinary skill in either the electrical connector field or the resistance welding design field is not as complete as it is with

respect to the other two Graham inquiries. The testimony as to the obviousness of Winsand to one skilled in the "electrical arts" implies a level of skill therein that would have perceived Winsand as obvious in 1961. TT pp. 430-431. However, it is advisable to be more specific. To this end I make the following findings:

[19] Electrically. Winsand is simple. I take judicial notice of the fact that the principles it uses are elemental, being taught in any high school physics text. The level of skill required to understand Winsand, Cage, Bauer, et al, is well within the range of skills possessed by those in the voltage transformation field and the "resistance welding" field. As to the skills present in the pertinent field, an ordinarily skilled person would be an engineer, either electrical, as are Winsand and Dilay, or mechanical, as are McDougal and Beaman. His knowledge would enable him to interpret schematic drawings using the symbols commonly used therein.[8] He would know the insulating and conductive properties of various substances. He would be able to depict his understanding of electrical devices schematically. He would posses an understanding of the application of connectors and switches to fields other than the one in which the device appeared. See, e.g. TT 552 (Dilay); TT 428 (McDougal); Winsand Deposition at 94. He would know how schematics are reduced to physical form. See, e.g. TT 531. This is not to say that the knowledge of one in the electrical connector or resistance welding fields would be limited to these skills. However, these basic skills he would possess, and these are the skills necesary to understand and apply the devices involved in this

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[8] Plaintiff's cross-examination of McDougal on this point notwithstanding. See TT 456-474.

lawsuit. Because Winsand is not complex, it is not difficult to find the defendants had sustained their burden of proof in this regard. See, e.g., Cloud v Standard Packaging Corp., 376 F2d 384, 391. 153 USPQ 317, 322-323 (7th Cir. 1967); Rockwell v Midland-Ross Corp., 438 F2d 645; 651-652, 169 USPQ 5, 9-11 (7th Cir 1971); Universal Athletic Sales Co. v American Gym., etc., 546 F2d 530, 542-543, 192 USPQ 193, 201-203 (3d Cir 1976) cert. denied 430 U.S. 984, 197 USPQ 783 (1977); compare, Saginaw Products Corp. v Eastern Airlines, Inc., 195 USPQ 551, 558, 562 (E.D. Mich 1977).

IV. Obviousness

[20] The inquiry in this regard may be accomplished by picturing a hypothetical person of ordinary skill in the electrical arts, or, more specifically, the voltage transformation art, at work in a room with the best of the prior art references arrayed about him: Bauer, Cage, Girton and ultrablitz. See, e.g. In re Winslow, 365 F2d. 1017, 151 USPQ 48 (C.C.P.A. 1966). The inventor is next confronted with Winsand and asked: "Can you reverse Bauer to obtain one output from several inputs," for Claims 1 and 2; "Can you add a Girton-type housing" to obtain Claim 4; "Can you rearrange the tap terminals into a rectangle" to obtain Claim 3 and, "Can you add to that a Girton-housing" to obtain Claim 5. If his answer to all of these is an unqualified "yes," the solution occurring ordinarily and naturally from the prior art, then the purported invention is obvious, provided, of course, that the inventor is one possessing the ordinarily high level of skill found in the pertinent field. I concluded Winsand's combination of Girton and Bauer to obtain Claim 4, the rearrangement of 4 to obtain Claim

5, and the straightforward adaptation to a reverse use to obtain claims 1, 2 and 3 are obvious. The reversal of function is obvious, the rearrangement of terminals is obvious and the addition of the Girton housing is obvious. None require any invention.

[21] In arriving at this conclusion, I have reviewed Claims 4 and 5 as "combination patents." As such, they are subject to a very strict scrutiny. Great Atlantic & Pacific Tea Co. v Super-Market Equipment Corp., 340 U.S. 147, 87 USPQ 303 (1950). The test for such patents is that they must produce a synergistic result; they must somehow exceed the sum of their parts. A new or surprising result must be present. Anderson's Black-Rock, Inc. v Pavement Salvage Co., Inc., 396 U.S. 57, 163 USPQ 673 (1969); Sakraida v Ag Pro, Inc., 425 U.S. 273, 189 USPQ 449 (1976); Shatterproof Glass Corp. v Guardian Glass Co. 462 F2d 1115, 1123, 174 USPQ 374, 379 (6th Cir) cert. denied 409 U.S. 1039, 176 USPQ 33 (1972); Bontrager v Steury Corp., 457 F Supp 526, 535, 201 USPQ 813, 820 (N.D. Ind. 1978). The Winsand device functions just as expected. It produces no new result.

V. Secondary Considerations

[22] Plaintiff's proofs to the effect that Winsand has been successful stand unrefuted. Ford has adopted as its standard a device virtually identical to Winsand, after previously using Winsand itself for some time. Fisher Body also accepted the device. However, this cannot save a patent from invalidity when there is a lack of invention. Graham, supra, 383 U.S. at 35-36, 148 USPQ at 473-474; American Seating Co. v National Seating Co., 586 F2d 611, 622, 199 USPQ 257, 264-265 (6th Cir 1978).

As to the "long felt need" to which Plaintiff adverts, I find that if there was a need, it was not particularly acute. Why else, for example, would Kirkhof, which conceived the germ of the idea in late 1960, have allowed the idea to languish for a year and a half? Kirkhof was the world's largest manufacturer or resistance welding equipment. It presumably had thorough knowledge of its market.[9]

Furthermore, resistance welding is mostly used in the auto industry; the needs of the automakers are basically the needs of the resistance welding field. The need for a *narrow* transformer did not manifest itself until Klingelhofer and Sarafian made it known. They did this twice, to Winsand at Dollar and to Emaus at Kirkhof. In each case, a device meeting the need was made within a short time. See e.g., Felburn v New York Central Railroad Co., 350 F2d 416, 425-26, 146 USPQ 622, 629-630 (6th Cir 1965) cert. denied 383 U.S. 935, 148 USPQ 771 (1966).

I note also the patent's difficult progress through the Patent Office. On two occasions the examiner rejected Winsand's claims on the basis of obviousness.

[23] Plaintiff also asserts that Defendants paid the supreme compliment to the patent in suit by copying it. However, nothing prevents copying an unpatentable device. Janex Corp. v Bradley Time, 460 F Supp 383,

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[9] Moreover, there is some evidence, at least, that the device did not fill any need at all. Roth testified that the Winsand type device he designed, the X device, was no better than the Girton transformers then on the market. Roth Deposition at 50. There might also have been problems with the rectangular Winsand device's ability to be plugged in to reverse polarity and short the transformer.

389, n. 10, 199 USPQ 525, 530-531, n.10 (S.D. N.Y. 1978). In sum, the patent in suit simply lacks the "impalpable something" that constitutes invention. Dickstein v Seventy Corp., 522 F2d 1294, 1299, 187 USPQ 138, 142 (6th Cir 1975), cert denied, 423 U.S. 1055, 188 USPQ 224 (1976).

What Winsand contributed is a practical version of the combination of the tap switch and the primary plug. He made commercially practicable in the resistance welding field an obvious combination (of Bauer and Girton) or adaptation (of Bauer).

[24] It is true Winsand perceived a demand in the market. Perception of need is the first step in the inventive process. Warren Telechron Co. v Waltham Watch Co., 91 F2d 472, 473, 34 USPQ 135, 137-138 (1st Cir 1937). Kirkhof perhaps failed to see the potential market. However, this is not enough. It must be followed by a nonobvious solution. Solex Laboratories v Graham, 165 F Supp 428, 118 USPQ 438 (S.D. Cal. 1958).

Plaintiff has failed to contribute anything new. To uphold his patent would be to remove the teachings of Bauer and Girton '431 from the public. The patented device is a good idea. But as the Supreme Court said in Sakraida:

> Though doubtless a matter of great convenience, producing a desired result in a cheaper and faster way, and enjoying commercial succes, [a combination patent is invalid if it does not] produce a "new or different function" . . . within the test of validity of combination patents.

VI. Infringement

[] The United States Court of Appeals for the Sixth Circuit has expressed its desire for a finding on infringement even though the patent has been held invalid. Noll v O. M. Scott & Sons, 467 F2d 295, 297 n. 1, 175 USPQ 392, 394-395 n.1 (6th Cir) cert. denied 411 U.S. 965, 177 USPQ 545 (1967). I find that the accused transformer infringes Claims 4 and 5 of the Winsand patent. See Graver Tank Co. v Linde Air Products Co., 339 U.S. 605, 608, 85 USPQ 328, 330 (1950); Maxon v Maxon Construction Company, 395 F2d 330, 158 USPQ 77 (6th Cir 1968); Schimizzi v Chrysler Corp., 462 F Supp 630, 634, 202 USPQ 180, 183-184 (S.D. N.Y. 1978); Strahle v Dillard's Dept. Stores, 459 F Supp 396, 398, 203 USPQ 503, 505 (W.D. Tex. 1978).

VII. Costs and Attorney's Fees

Section 285 of Title 35 provides:

> The court in exceptional cases may award reasonable attorney fees to the prevailing party.

[26] Defendants argue Plaintiff has persisted in this lawsuit only to harass them and that Plaintiff's conduct has been characterized by stubborness and bad faith. Defendants point to the manner in which Plaintiff has shifted his theory in this case and urge me to infer that Plaintiff has thereby conceded the invalidity of his claims. I conclude that the Defendants' argument in this respect is devoid of merit. Although this was not a particularly close case, Plaintiff's positions were based on a colorable interpretation of applicable law. The

Plaintiff was "honestly mistaken as to a reasonably debatable question . . ." Enterprise Mfg Co. v Shakespeare Co., 141 F2d 916, 921, 61 USPQ 201, 205-206 (6th Cir 1944), quoted in Elton Corp. v Basic Incorporated, 599 F2d 745 (6th Cir 1979); Campbell v Campbell Machines Co., F2d (slip opinion at pp. 8-12, June 27, 1979). I find no evidence of the conduct necessary to support an award of fees and costs.

An appropriate order may be submitted.

[Appendices omitted]

APPENDIX B

OPINION

Nos. 80-1100, 80-1130

(United States Court of Appeals
for the Sixth Circuit)

(Decided and Filed February 12, 1982)

(Dollar Electric Company, Plaintiff-Appellant, and Cross-Appellee v. Syndevco, Inc., and Ford Motor Company, Defendants-Appellees, and Cross-Appellants.)

Before: Weick* and Engel, Circuit Judges and Peck, Senior Circuit Judge.

Weick, Circuit Judge, delivered the opinion of the Court, in which Peck, Senior Circuit Judge, joined. Engel, Circuit Judge, (p. 9) filed a separate concurring opinion.

Weick, Circuit Judge. The suit in the district court was brought by Dollar Electric Company (Dollar) against Syndevco, Inc. and Ford Motor Company for infringement of Winsand U. S. Patent No. 3,281,747(747), issued on October 25, 1966 and assigned to Dollar. The patent in suit is for a device which changes the output voltages from a transformer useful in this case by automobile manufacturers in the field of resistance welding.

The case was tried in an extensive bench trial, a jury being waived, before District Judge Feikens. The Judge

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* Judge Weick became a Senior Circuit Judge on December 31, 1981.

gave careful consideration to all of the issues and wrote a 61 page opinion, in which he analyzed all of the issues, adopted findings of fact and conclusions of law, and appended thereto the five claims of the patent in suit and the drawings. Joint Appendix pages 22-83. Drawings, a, b and c. Judge Feikens held that all of the claims of the patent in suit were invalid. He further held that if claims 4 and 5 had been valid, that they were infringed by the accused device. Claim 1 he found to be essence of the invention and that the remaining claims contained additional elements that were either obvious or were anticipated by the prior art. Dollar has appealed only in No. 80-1100 from the judgment holding claims 4 and 5 of its patent invalid. It is noteworthy that since Dollar did not appeal from the judgment of the district court holding that Claims 1, 2 and 3 to be invalid, that part of the judgment has now become final and is the law of the case. Only claims 4 and 5 are in issue in this appeal. Defendants-Appellees have cross-appealed from that part of the judgment relating to infringement. For the reasons hereinafter stated, we affirm the judgment in No. 80-1100, and, since the patent is invalid, it is not necessary to decide the issue of infringement and the protective cross appeal taken in No. 80-1130 is therefore dismissed at defendants-cross-appellants' costs.

I

Dollar manufactures electrical resistance welding machines for use in mass production assembly lines. Such machines are used primarily by automobile manufacturing companies. Electrical transformers are a component in these machines. Defendant Syndevco, Inc. (Syndevco) manufactures receptacle and plus components for these transformers. Dollar and Syndevco

are both suppliers of defendant Ford Motor Co. (Ford), which purchases resistance welding equipment from Dollar, Syndevco, and others for use in its manufacturing plants.

Resistance welding consists of clamping two pieces of metal together and welding them by passing an electric current through them. The transformer controls the voltage which is applied. It is necessary to provide some means to adjust the output voltage of the transformer to accommodate thicknesses or different materials of the parts that are to be welded together. This is done by means of tap switches. During the 1950's and 60's the standard technology was to use rotary tap switches, as in prior patents Girton '431 design and Woofter '654.

A tap switch is a switch that connects an electrical power supply to any one or two or more taps. A tap is a branch connection to an electrical coil. A plug tap switch is a power supply for making an electrical connection to any one of several pairs of tap terminals. A transformer is an electrical device that is used to change the voltage of an alternating electrical current power supply to a higher or lower voltage.

In early 1962, Fisher Body requested Dollar to design a narrow transformer 4½ inches wide. This was several inches narrower than the normal transformer at that time. Dollar's employee, Mr. Winsand, began work on this project in April 1962. He could not make the transformer small enough using currently available tap switches. He then thought of combining the functions of the primary disconnect plug and tap switch. This eliminated all moving parts of the tap switch of the Girton '431 transformer and permitted a successful design in the required size. The new transformers were

built and tested by July 9, 1962 and later patented. They were placed in service at Fisher Body's Marion, Indiana plant.

Winsand made two versions of his invention, a circular version and a rectangular or "in-line" version. The Winsand invention had several advantages over previous technology: It was more compact and supplied a lesser need for a more reliable, inexpensive construction for the tap switch.

When the Winsand transformer proved successful at Fisher Body, Ford began using the transformers at its Metal Stamping Division, under the supervision of Mr. John Murphy. After ten years of using Dollar's transformers, Mr. Murphy designed a similar transformer in which the tap terminals are housed in a plastic end cover for the transformer. This is the accused transformer. Syndevco does not manufacture complete transformers, so Ford purchased Girton '431 transformers and supplied them to Syndevco. Syndevco then cannibalized the Girtons and fitted them with the end cover and primary disconnect plug of the accused transformers. After four years of debugging, the Murphy transformer was adopted as the standard for the Metal Stamping Division of Ford.

II

Claim 4

The district judge held that "Claim 1 sets forth the essence of the invention." We agree. He listed the nine basic elements of the claim as follows:

(1) A transformer having a primary and a secondary

(2) A plurality of taps connected at spaced points to the primary

(3) The taps are connected to tap terminals, which are insulated from one another

(4) A primary disconnect plug with a pair of spaced female terminal receptacles connected to a voltage source

(5) The tap terminals are arranged so that there are two or more pairs created, the pairs being spaced apart the same distance as the plug receptacles

(6) Neither terminal of the first pair of terminals is a member of another pair

(7) A plug that can be connected to energize the primary by fitting into removable contact with the terminals

(8) The pairs of tap terminals are spaced so that the plug can bridge various pairs of them

(9) The primary disconnect plug functions as a tap switch

He describes the ramaining claims as follows:

Claims 2 and 4 more specifically describe a circular version of the Claim 1 device, without specifically referring to Claim 1. In Claim 2, it is specified that the pairs of tap terminals called for by (5) above be achieved by placing one common tap terminal in the center of a circular array of other tap terminals. Thus, by rotating a plug around the center tap, various pairs are produced, with various corresponding output voltages. This, of course, does not meet the requirement (6) in Claim 1 that "neither terminal of said first pair of terminals is a member of another pair"; the center tap terminal is common to every pair.

Claim 4 essentially repeats Claim 2 but recites the addition of a housing surrounding the tap terminals, with an opening through which the primary plug passes. The plug is fitted with a cover plate which, after the plug is engaged, may be fastened to the housing, totally enclosing the terminal assembly. Claim 4 is represented pictorially by PTX 19, Appendix "B." (The labels are mine)

Claim 3 is simply another arrangement of the tap terminals. There are six terminals, arranged in three horizontal rows of two each. The top and bottom rows are individual tap terminals, connected at varying points electrically to the primary coil. The two middle terminals are shorted together and are both connected to the opposite end of the primary from the four taps already described. By positioning the plug across the four pairs of terminals formed by the top and bottom rows, four output voltages may be obtained.

Claim 5 recites Claim 3 with the addition of a housing surrounding the terminals and a cover plate behind the plug. With the addition of a gasket, the cover plate completely seals the terminal and plug construction from the outside.

Claim 4 of the patent in suit is based upon invalid Claim 2 with the additional element of a housing that encloses the primary and secondary windings and the primary tap terminals with an opening through which the plug may be inserted to engage a selected pair of tap terminals. It specifies a plate secured to the plug to cover the portion of the opening that is not covered by the plug when it is inserted into the opening. Both claims 2 and 4 are restricted to the circular arrangement of the tap terminals illustrated in the patent drawings.

Judge Feikens held that Claim 2 was fully anticipated by the German patent to Bauer, No. 1,303,494 or its Italian counterpart, No. 315,072. Since Dollar did not appeal from this holding, it has become final and is binding on this court as the law of this case. Judge Feikens further held that Claim 4 was an obvious adaption of the Bauer plug tap switch.

To specify a housing to enclose the equipment did not amount to invention as it was old as the art. *American Seating Co. v. National Seating Co.*, 586 F.2d 611 (6th Cir. 1978).

The district judge further held that Claim 4 was invalid as an obvious combination of Bauer '494 and Girton '431 within the meaning of 38 U.S.C. § 103. We agree.

Dollar objected to the court's use of Girton '431 as prior art on the ground that it was not cited by the defendants as required by 35 U.S.C. § 282. In fact, it was not cited to the patent office and the patent was issued without the citation of any relevant prior art. Dollar also claimed surprise, but the inventor Winsand was not surprised and made no such claim. He testified for Dollar during its prima facie case and on cross-examination stated that the tap switch and transformer disclosed in Girton '431 patent as exemplified by the physical specimen PX15A was the closest prior art of which he was aware when he made his invention. Girton patent was introduced in evidence by Dollar and is marked PX10.

The court therefore was fully justified in considering the testimony of the inventor and applying it to the case. The fact that the patent office did not consider the applicable prior art which clearly existed as shown by the testimony of the inventor, greatly weakens and largely dissipates the statutory presumption of validity of

the patent under 35 U.S.C. § 282. *Dunlop v. Kelsey-Hayes Co.*, 484 F.2d 407, 413 (6th Cir. 1973); *B. F. Goodrich Co. v. Rubber Latex Products, Inc.*, 400 F.2d 401 (6th Cir. 1968). Claim 4 is therefore invalid.

III

Claim 5

Claim 5 of the Winsand patent is based on invalid Claim 3 with the recitation of an additional element of features of a housing that encloses the primary and secondary windings and the tap terminals. It also specifies an opening in the housing exposing the tap terminals and a rectangular plate secured to the plug for covering the opening when the plug is inserted through the opening and into the housing. Claims 3 and 5 are restricted to the straight line arrangement of the tap terminal shown in Figs. 5-8 of the drawings of the Winsand patent. As found by the district court, this was an obvious rearrangement of the circular arrangement of the Winsand patent and was disclosed in the German patent to Bauer.

The patent examiner in rejecting Winsand's claims stated:

> Whether the terminals of a disconnect plug and or the tap terminals are arranged in a straight line or in a circular is without patentable merit.

Dollar's expert witness Townsend Beaman testified that he regarded them as equivalents. In other words, it was obvious.

The arrangement of three tap terminals in a straight line so that the plug can engage the middle terminal and either of the other two is disclosed in the parior [*sic*] patent to McArdle '200.

What has been said in discussing Claim 4 is equally applicable to Claim 5 and the district court's ruling as to

Claim 4 requires a holding that Claim 5 is also invalid and we so hold.

IV

In our opinion, the findings of fact adopted by the district court are supported by substantial evidence and its conclusions of law are correct. The court did not abuse its discretion in disallowing attorneys' fees.

The judgment of the district court is affirmed. Each party will pay its own costs in Appeal No. 80-1100.

Engel, Circuit Judge, concurring. I concur because I agree that the district court's findings that Claims 4 and 5 are invalid as an obvious combination of Bauer '494 and Girton '431 within the meaning of 35 U.S.C. § 103 are not clearly erroneous. I would avoid the suggestion in the majority decision that the trial judge's rejection of Claim 2, not appealed from here, is the "law of the case" and for this reason commands a similar result for Claim 4. U.S.C. § 282 cautions:

> A patent shall be presumed valid. *Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim..*

(emphasis added). The legislative history of this section seems to indicate that a "law of the case" approach in circumstances such as this is not favored. S. Rep. No. 301, 89th Cong., 1st Sess. *reprinted in* [1965] U.S. Code & Cong. Ad. News 2315, 2319.

I agree that Judge Feikens' use of Girton '431 was proper. It came as no surprise at trial, and appears to be expressly permissible under 35 U.S.C. § 282 "on such terms as the court requires." *Shatterproof Glass Corp. v. Guardian Glass Co.*, 462 F.2d 1115, 1121 (6th Cir.), *cert. denied* 409 U.S. 1039 (1972).

APPENDIX C

ORDER

Nos. 80-1100, 80-1130

(United States Court of Appeals
for the Sixth Circuit)

(Filed Apr. 20, 1982)

(Dollar Electric Company, Plaintiff-Appellant and Cross-Appellee v. Syndevco, Inc., and Ford Motor Company, Defendants-Appellees and Cross-Appellants)

Before Engel, Circuit Judge, Weick and Feck, Senior Circuit Judges.

A majority of the active circuit judges of this court not having voted in favor of en banc consideration of the petition for rehearing, said petition for rehearing was referred to the panel for consideration and disposition.

Upon consideration of the petition for rehearing, we are of the opinion that the issues of this appeal have been adequately treated by the panel and that the petition for rehearing lacks merit.

It is therefore ordered that the petition for rehearing be and it is hereby denied.

ENTERED BY ORDER OF THE COURT

/s/ John P. Hehman
Clerk

APPENDIX D

Figures 6, 7 and 8 of Winsand U.S. Patent No. 3,281,747

Oct. 25, 1966 A. O. WINSAND 3,281,747
MULTI-TAP PLUG 604
Filed Feb. 25, 1963 4 Sheets-Sheet 4

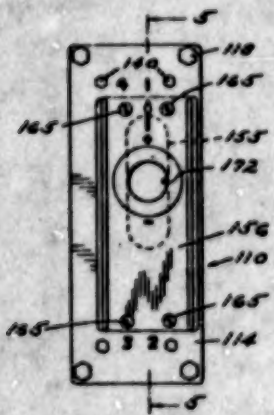


FIG. 6

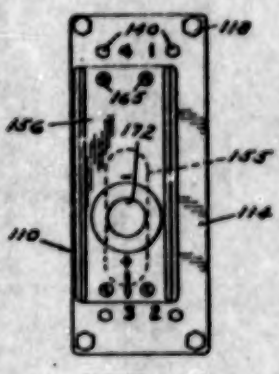


FIG. 7

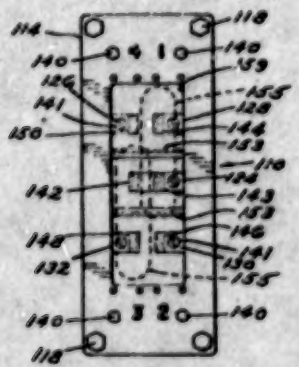


FIG. 8

INVENTOR.
AMOS O. WINSAND
BY
ATTORNEYS

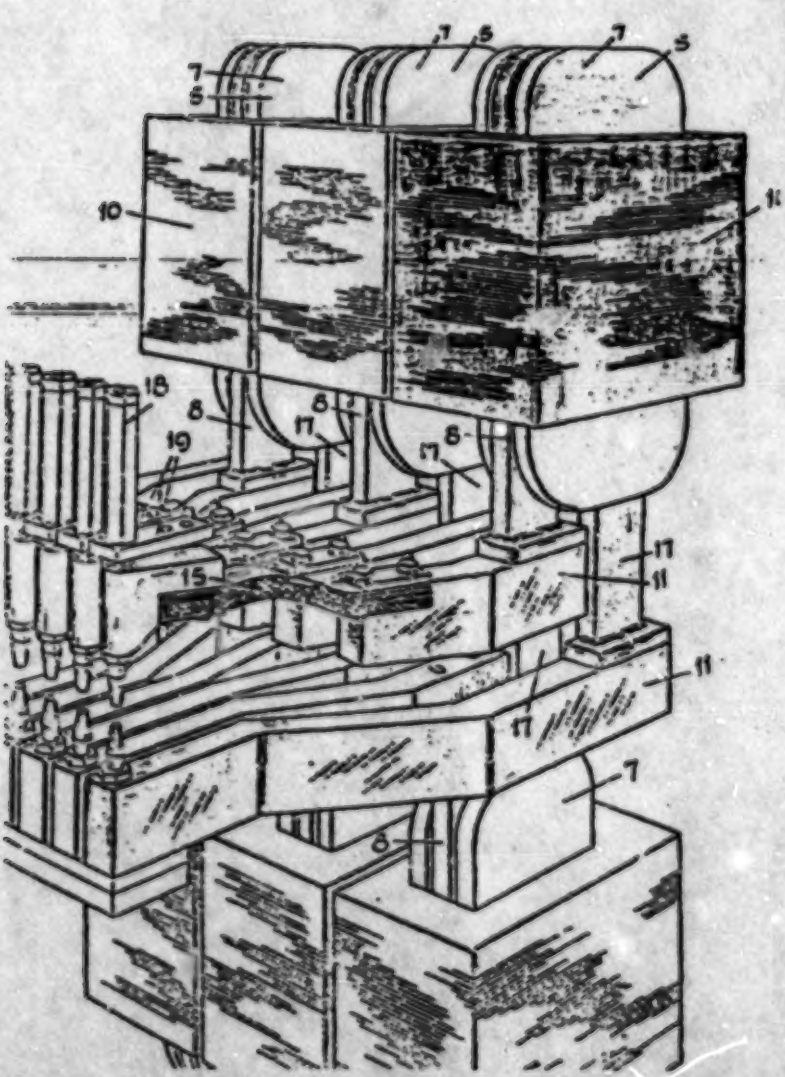
APPENDIX E

Figure 1 of Martin U.S. Patent No. 2,242,867

', 1941. W. H. MARTIN 2,242,867

WELDING MACHINE

Filed Feb. 24, 1940 3 Sheets-Sheet 1



APPENDIX F

Figures 3, 4 and 5 of Girton U.S. Patent 3,024,431

March 6, 1962 P. E. GIRTON 3,024,431

WATER COOLED WELDING TRANSFORMER

Filed Sept. 23, 1957 2 Sheets-Sheet 2

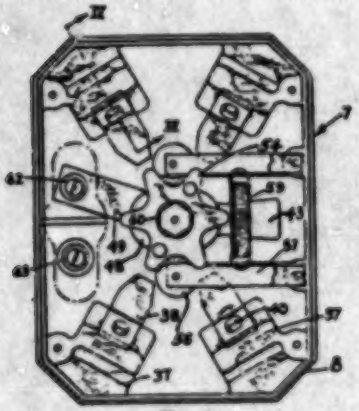


Fig. 3

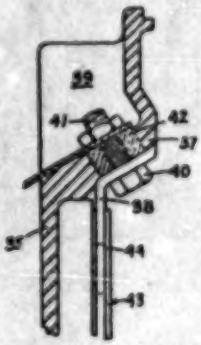


Fig. 4

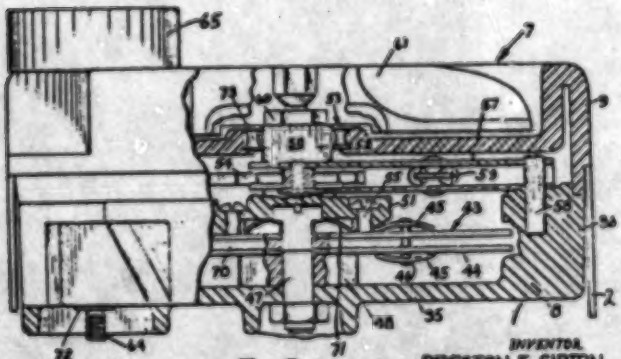


Fig. 5

INVENTOR.
PRESTON E. GIRTON
BY
Richard Hemmelel
ATTORNEYS

APPENDIX G

Figures 12, 13 and 14 of Taylor, et al U.S. Patent No. 2,929,915

636

March 22, 1960 R. M. TAYLOR ET AL 2,929,915

WELDING TRANSFORMER APPARATUS

Filed March 31, 1958 4 Sheets-Sheet 4

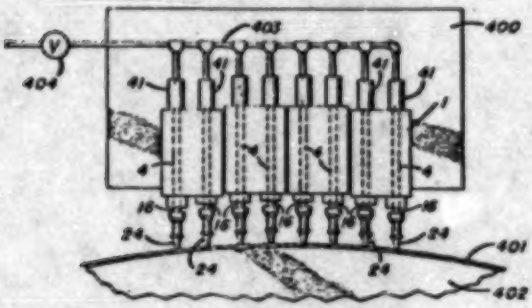


Fig. 12

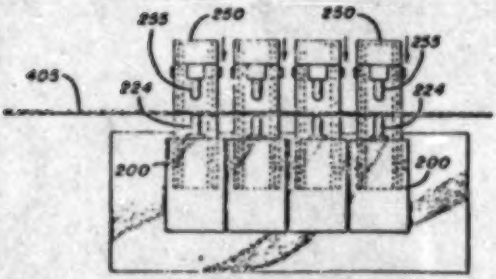


Fig. 13

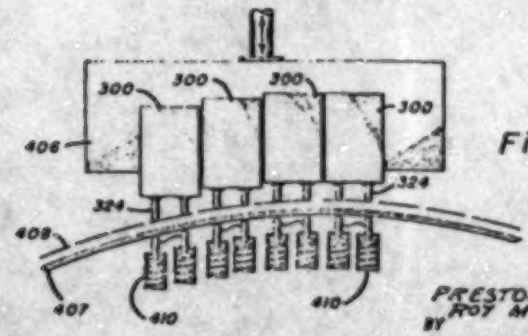


Fig. 14

INVENTOR.
PRESTON E. GIRTON
ROY M. TAYLOR
BY
ATTORNEYS

APPENDIX H

Figures 1, 2, 3, 6 B, and 11 of Cage U.S. Patent No. 3,139,942

June 30, 1964 A. G. CAGE, JR 3,139,492
REPOSITIONABLE CONNECTOR PLUG WITH POSITION ELIMINATOR MEANS
Filed Jan. 11, 1961 3 Sheets-Sheet 1

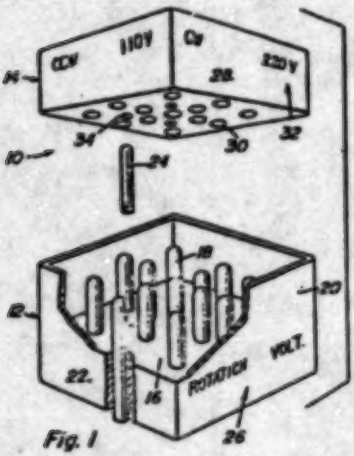


Fig. 1

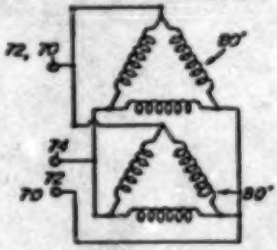


Fig. 11

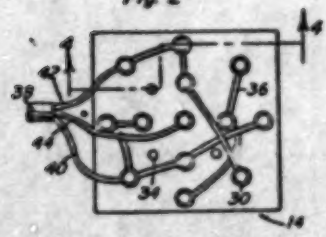


Fig. 2

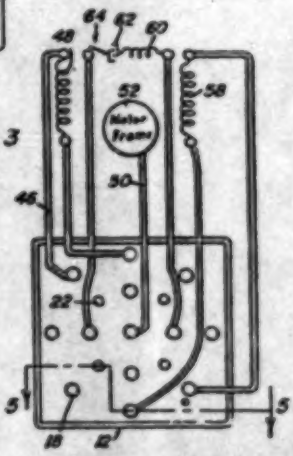


Fig. 3



Fig. 6 B

Albert G. Cage Jr.
INVENTOR.
By [signature]

APPENDIX I

Figures 1 through 5 of Bauer German Utility Model Patent No. 1,303,494

BAUER GERMAN UTILITY MODEL PATENT NO. 1,303,494

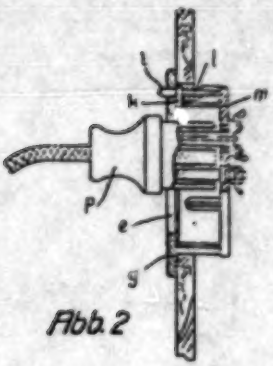


Abb. 2

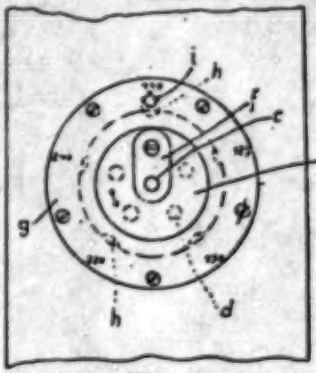


Abb. 3

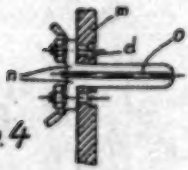
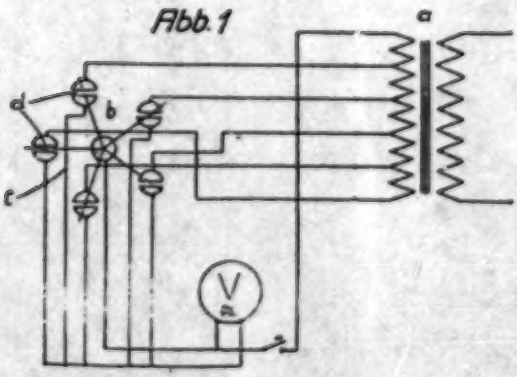


Abb. 4



Abb. 5

Abb. 1



APPENDIX J

Figure 1 of Girton U.S. Reissue Patent No. 24,838

219/116

SEARCH ROOM

618

June 14, 1960 P. E. GIRTON Re. 24,838

PRIMARY DISCONNECT PLUG FOR WELDING TRANSFORMERS

Original Filed Aug. 13, 1952 3 Sheets-Sheet 1

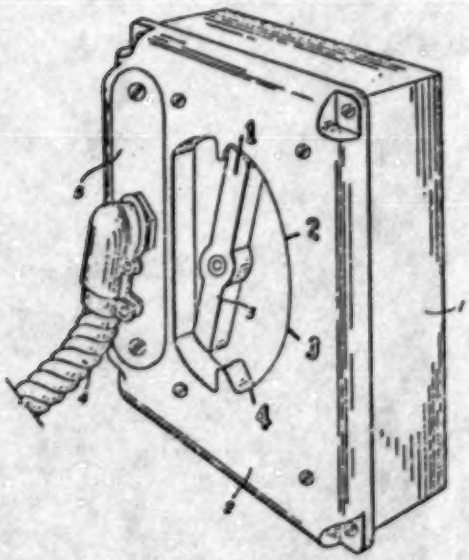


Fig. 1

INVENTOR.
Preston E. Girton
BY
ATTORNEYS

Plaintiff's
Trial
Exhibit 9

Office - Supreme Court, U.S.
FILED
SEP 20 1982
ALEXANDER L. STEVAS,
CLERK

No. 82-291

IN THE

Supreme Court of the United States

October Term, 1982

DOLLAR ELECTRIC COMPANY
Petitioner,
SYNDEVCO, INC., and
FORD MOTOR COMPANY,
Respondents.

BRIEF FOR RESPONDENTS IN OPPOSITION TO PETITION FOR WRIT OF CERTIORARI

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QUESTION PRESENTED FOR REVIEW

As pointed out hereinafter, the questions raised by the Petition either have no foundation in the facts of the case or the decisions below, or would not be dispositive of the case no matter how answered.

THE PARTIES

The parties are identified in the case heading.

In compliance with Rule 28.1, Appendix A to this brief lists all parent companies, subsidiaries and affiliates of Ford Motor Company other than wholly owned subsidiaries. Syndevco has none.

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DOLLAR ELECTRIC COMPANY
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Respondents.

BRIEF FOR RESPONDENTS IN OPPOSITION TO PETITION FOR WRIT OF CERTIORARI

THE SUPPLEMENTAL OPINION OF THE DISTRICT COURT THAT WAS OMITTED FROM THE PETITION

Following its initial opinion of September 10, 1979 and on December 26, 1979, the District Court handed down a supplemental opinion in response to petitioner's "Motion to Amend Findings and Judgment or Alternatively to Grant a New Trial." This second opinion is nowhere mentioned in the Petition.

A copy of the opinion of December 26, 1979 is attached to this brief as Appendix B. It appeared in the Joint Appendix in the Court of Appeals at pages 84-86. The motion and supporting brief which elicited the opinion appeared in the Joint Appendix at pages 59-83, and the Order denying the motion appeared at page 87.

SUPPLEMENTAL STATEMENT OF THE CASE

The Petition, under the heading "Statement of the Case," is primarily devoted to reargument of the issue of patentability based on the contention that the alleged invention of the Winsand patent No. 3,281,747 in suit, filled a long felt need for a small sized transformer for use in resistance welding in the automobile industry. The fact is that while the Winsand patent in suit barely mentions in the specification and in a reference to the drawing that the disclosed transformer may be used in a resistance welding operation, there is no other reference to welding in the patent and no reference to small size, nor was there any representation made to the Patent Office that the disclosed transformer had any advantages for use in welding.

Near the end of the prosecution of the application for the Windsand patent and when all claims had been rejected as anticipated by or obvious in view of a German patent to Bauer, No. 1,303,494 which disclosed a transformer for a moving picture camera, or over Bauer in combination with a U.S. patent to Girton 3,024,431, Windsand's attorney sought by amendment to limit all claims to a welding transformer. Entry of the amendment was refused on the ground it was too late. In response, Windsand's attorney petitioned the Commissioner for an order directing entry. Before the petition could be acted on, Windsand's attorney learned that the Examiner would allow all claims if present claim 1 (then numbered 4) was amended in a respect not relevant here. The attorney promptly made the suggested amendment *and withdrew the petition*, thus restoring the claims to a scope that covered transformers useful for any and all purposes. (JA in Court of Appeals at pp 812-846) The

District Court Opinion (Pet. App. A-24 to A-28) held that Windsand was estopped to contend that the claims were patentable as defining a transformer useful in a welding transformer because they specified no features useful only in a welding transformer, and because of the deliberate and voluntary cancellation of all references to welding in the claims.

Even if the claims are construed to require a welding transformer, the evidence precludes a holding that the patented transformer filled a long felt need. Eighteen years after the alleged invention Ford Motor Company is still using the Girton '431 construction (Joint App Ct of Appeals 421). The evidence of commercial success largely rests on the accused transformer, which is quite unlike the transformer disclosed in the Windsand patent*.

A second point dealt with in petitioner's "Statement of the Case" resides in the contention that in finding the claims of the patent in suit invalid the courts below erred in not applying the obviousness test of 35 USC 103 and *Graham v. Deere*, 383 US 1 (1966). According to petitioner, the courts below held the patent claims invalid because the several elements of the claimed combination did not produce a synergistic result, i.e. a result that is more than the mere sum of the results of the elements acting individually, citing *Sakraida v. Ag Pro, Inc.*, 425 US 273 (1976), *Anderson's-Black Rock, Inc. v. Pavement Salvage Company*, 396 US 57 (1969), and *Great A & P Tea Co. v. Supermarket Equipment Corp*, 340 US 147 (1950).

---

* Respondents, Syndevco and Ford, cross-appealed urging that the District Court's holding of infringement was erroneous, but the Court of Appeals did not rule on that issue because of its conclusion that the claims in suit are invalid. If this Court should reverse the courts below on the validity issue, the Court of Appeals will have to rule on the Cross Appeal.

However, it is unnecessary to consider petitioner's detailed fact statements because, as will be seen, it is clear from the following discussion of petitioner's Question 1 that these contentions fail to constitute a ground for granting certiorari.

Another point raised by the petition is the contention that the courts below improperly considered the Girton patent 2,304,431 as prior art because respondents had not given thirty days notice of reliance upon that patent as required by 35 USC 282. This point is dealt with hereinafter in considering petitioner's Question 3.

SUMMARY OF THE ARGUMENT

PETITIONER'S QUESTION 1

This question rests on a false assumption that the courts below failed to apply the test of unobviousness enacted by 35 USC 103 and elucidated by this Court in *Graham v. Deere, supra*.

As will be pointed out hereinafter the District Court painstakingly made the findings required by *Graham*, and those findings lead inexorably to the legal conclusion that all of the claims of the Winsand patent in suit are invalid.

Plaintiff Dollar Electric acquiesced in that conclusion as to claims 1, 2 and 3 of the patent, but appealed the conclusion as to claims 4 and 5 without attacking the District Court's findings of fact. The Court of Appeals affirmed the holding that claims 4 and 5 were invalid.

Plaintiff's Question 1 and the arguments presented with reference to it seek to make the point that because the District Court quoted language from the *Sakraida* and *Anderson's-Black Rock* decisions of this Court in which the improbability of producing a synergistic result from

a combination of old elements is discussed, that the District Court had in some manner made synergism a condition of patentability. This is not the proper interpretation of the District Court's opinion, as is made clear by its supplemental opinion of December 26, 1979. Moreover, the opinions of the Court of Appeals apply 35 USC 103 and this Court's decision in *Graham* in affirming the decision below with no reference to synergism, or a new and surprising result.

PETITIONER'S QUESTION 2

Question 2 and Dollar's argument in connection with it appear to rest on an erroneous interpretation of the majority opinion in the concurring opinion of Judge Engel in the Court of Appeals below.

Judge Engel in his concurring opinion states that:

> "I would avoid the suggestion in the majority decision that the trial judge's rejection of Claim 2, not appealed from here, is the 'law of the case' *and for this reason commands a similar result for* Claim 4." (emphasis added)

Neither the emphasized concluding clause nor its equivalent were included in the majority opinion. Moreover, the majority considered claims 4 and 5 on their own and held them invalid for obviousness, and Judge Engel concurred.

This offers no support for the petition.

PETITIONER'S QUESTION 3

Under this question, Dollar argues that the courts below could not base a holding of obviousness on the patent to Girton because no notice was given by defendants prior to trial pursuant to 35 USC 282.

This is no ground for granting the petition because the sole purpose of the statutory notice requirement is to prevent surprise, and in this case Dollar Electric, itself, placed the Girton '431 patent in evidence along with supporting evidence. And Winsand, the inventor of the patent in suit, testified during Dollar's prima facie case concerning its relevance as prior art and that it was the most pertinent prior art with which he was familiar at the time he made the alleged invention of the patent in suit.

Accordingly, Dollar Electric has not been surprised or prejudiced. Moreover, the courts below also held the claims invalid on other grounds.

ARGUMENT

PETITIONER'S QUESTION 1

> "Is there a special, more strict, non-statutory test for determining the validity of patents for so-called 'combination' inventions as is the rule in the Fifth, Sixth and Eighth circuits, or, does the test set forth in 35 USC 103 of obviousness or non-obviousness apply to patents for all inventions, whatever their type, as is the rule in the Third and Seventh circuits, and at least one panel of the Ninth Circuit?"

This question asks the Court to decide which of two alleged tests of patentability is correct. The second mentioned test, as made clear in the petition, is set forth in *Graham v. Deere, supra*, and in 35 USC 103. According to the petition, the first, which is applicable to combinations of old elements, allegedly requires as a

condition of patentability that the old elements produce a synergistic result, which is more than the sum of their several effects taken separately, citing *Anderson's-Black Rock v. Pavement Salvage Co., Inc., supra*, and *Sakraida v. Ag Pro, Inc., supra*. Petitioner asserts that only the second test is appropriate, namely the test of obviousness.

At the outset it is by no means clear whether synergism is an independent prerequisite for patentability or merely a guide for application of the statutory test of nonobviousness where the patent claims in question call for a combination of old elements. At least two lower courts have held that synergism is not an independent test of patentability: *Republic Industries, Inc. v. Schlage Lock Co.*, 592 F.2d 963 (7th Cir. 1979), and *Rengo Co. v. Molins Machine Co.*, 657 F.2d 535 (3rd Cir. 1981), *cert. den.* 70 L.Ed 2d 591, 102 S.Ct. 600 (1981); and in *Dann v. Johnston*, 425 US 219, (1976) this Court held that the invention in issue was unpatentable because obvious to one skilled in the art, without mentioning synergism.

In *Roanwell Corporation v. Plantronics, Inc.*, 429 US 1004 (1976) a majority of this Court (Justices Brennan and White dissenting) refused to grant certiorari to resolve the question of whether the proper test of patent validity is unobviousness or the existence of a synergistic result, where the lower court had sustained a patent on the ground that its subject matter was unobvious.

But this question need not be resolved because it is clear from the following consideration of the opinions of the courts below that they applied the statutory and *Graham-Deere* test to which petitioner has no objection.

In *Graham v. Deere, supra*, the Court said:

> "While the ultimate question of patent validity is one of law, A. & P. Tea Co. v. Supermarket Corp., supra, 340 US at 155, 95 L ed at 168, the § 103 condition, which is but one of three conditions, each of which must be satisified, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy." 383 U.S. at 17-18.

Initial Opinion in the District Court

The District Judge in his initial opinion made a painstaking analysis of the evidence and detailed findings on the three factual inquiries required by *Graham* (App. A-1 to A-33). Having done so he concluded that the subject matter of claims 4 and 5 of the Winsand patent 3, 281,747 was obvious (A-33 to A-34). Following the statement of his conclusions respecting obviousness he stated:

> ". . . In arriving at this conclusion, I have reviewed Claims 4 and 5 as 'combination patents.' As such, they are subject to a very strict

> scrutiny. Great Atlantic & Pacific Tea Co. v. Super-Market Equipment Corp., 340 U.S. 147, 87 USPQ 303 (1950). The test for such patents is that they must produce a synergistic result; they must somehow exceed the sum of their parts. A new or surprising result must be present. Anderson's Black-Rock, Inc. v. Pavement Salvage Co., Inc., 396 U.S. 57, 163 USPQ 673 (1969); Sakraida v. Ag Pro, Inc., 425 U.S. 273, 189 USPQ 449 (1976); Shatterproof Glass Corp. v. Guardian Glass Co., 462 F2d 1115, 1123, 174 USPQ 33 (1972); Bontrager v. Steury Corp., 457 F Supp 526, 535, 201 USPQ 813, 820 (N.D. Ind. 1978). The Winsand device functions just as expected. It produces no new result." (Pet. App A-34)

The quoted pararaph is followed by a discussion of the "secondary considerations" referred to by *Graham*, and a statement that they did not justify a holding of validity.

District Court's Supplemental Opinion of December 26, 1979 (Appendix B to this brief)

The District Court's supplemental opinion of December 26, 1979, was rendered in response to petitioner's "Motion to Amend the Findings and Judgment, or Alternatively to Grant a New Trial." The brief filed in support of that motion appears in the Joint Appendix in the Court of Appeals at pages 59-83. It raises all of the contentions raised in support of the present petition.

The District Court's opinion on the motion was included in the Joint Appendix in the Court of Appeals at pages 84-86 and is attached hereto as Appendix B. In that opinion the District Court reiterated the basis for its

holding that the subject matter of claims 4 and 5 was obvious within the meaning of 35 USC 103; *and in doing so made no mention of the questions of synergism, new result or unexpected result*. Nor did it indicate that patents on combinations of old elements should be given any treatment other than that to which other patents were subject.

This supplemental opinion makes clear, if the initial opinion did not, that at least one independent ground for the holding of invalidity rested unequivocally on the conclusion that the subject matter was obvious within the meaning of 35 USC 103. Whether or not other grounds were or are found for holding the patent claims invalid is thus irrelevant and immaterial.

Opinion of Court of Appeals (Pet. App. B-1 through B-9)

The Court of Appeals opinion of February 12, 1982 affirmed the District Court's holding that claims 4 and 5 of the patent in suit are invalid, but did so only upon the ground that the subject matter of those claims was obvious within the meaning of 35 USC 103. The pertinent language of the majority opinion reads as follows:

> "Judge Feikens further held that Claim 4 was an obvious adaption of the Bauer plug tap switch.
>
> "To specify a housing to enclose the equipment did not amount to an invention as it was old as the art. *American Seating Co. v. National Seating Co.*, 586 F.2d 611 (6th Cir. 1978).
>
> "The district judge further held that Claim 4 was invalid as an obvious combination of Bauer '494 and Girton '431 within the meaning of 38 USC 103. We agree." (B-7)

In discussing claim 5, the majority opinion used the following relevant language:

> "The patent examiner in rejecting Winsand's claims stated:
>
> > 'Whether the terminals of a disconnect plug and/or the tap terminals are arranged in a straight line or in a circular is without patentable merit.'
>
> "Dollar's expert witness Townsend Beaman testified that he regarded them as equivalents. In other words, it was obvious."
>
> "The arrangement of three tap terminals in a straight line so that the plug can engage the middle terminal and either of the other two is disclosed in the parior (sic) patent to McArdle '200."
>
> "What has been said in discussing Claim 4 is equally applicable to Claim 5 and the district court's ruling as to Claim 4 requires a holding that Claim 5 is also invalid and we so hold." (Pet. App B 8 and 9)

Engel, Circuit Judge, wrote a concurring opinion in which he said:

> "I concur because I agree that the district court's findings that Claims 4 and 5 are invalid as an obvious combination of Bauer '494 and Girton '431 within the meaning of 35 USC 103 are not clearly erroneous." (Pet. App B-9)

The Court of Appeals opinions contain no mention of any criteria of invalidity other than obviousness. For that reason alone the petition should not be granted for consideration of Question 1, which is only relevant if the courts below had *not* held claims 4 and 5 invalid for obviousness.

PETITIONER'S QUESTION 2

> "Does the novel 'law of the case' theory pronounced by the Court of Appeals by which the Court found appealed claims invalid through an invidious comparison of non-appealed claims found invalid by the District Court constitute an impermissable conflict with the express language of the second sentence of 35 USC 282 that 'each claim of a patent . . . shall be presumed valid independently of the validity of other claims. . .'?"

Petitioner brought this suit in the District Court on all five claims of the Winsand patent, but when all claims were held invalid, petitioner appealed only as to claims 4 and 5 (Pet. App. B-2). "Question 2" prompts a consideration of the differences between these two sets of claims and the significance of those differences in weighing the validity of the appealed claims that are here involved.

Since no appeal was taken from the holding that claims 1, 2 and 3 were invalid the majority opinion in the Court of Appeals at Pet. App B-2 stated:

> "It is noteworthy that since Dollar did not appeal from the judgment of the District Court holding claims 1, 2 and 3 invalid, that part of the judgment has now become final and is the law of the case."

The majority opinion went on to explain the scope of claims 4 and 5 and point out how they differed from corresponding invalid claims 2 and 3, respectively, concluding that claims 4 and 5 were invalid for

obviousness. Judge Engel, in his concurring opinion (at Pet. App. B-9) agreed that claims 4 and 5 "are invalid as an obvious combination of Bauer '494 and Girton '431 within the meaning of 35 USC 103," but added "I would avoid the suggestion in the majority decision that the trial judge's rejection of claim 2, not appealed from here, is the 'law of the case' *and for this reason commands a similar result for claim 4.*" (emphasis added)

However, the majority opinion does *not* contain the phrase which is emphasized in the above quote from Judge Engel and which reads "and for this reason commands a similar result for claim 4," nor did the majority opinion anywhere suggest that the invalidity of claims 1, 2 and 3, or any of them, reflected adversely on the validity of claims 4 and 5. Accordingly, the perceived conflict did not exist.

Judge Engel in support of his comment said:

> "USC 282 contains: 'A patent shall be presumed valid. Each claim of a patent *(whether in independent, dependent or multiple dependent form) shall be presumed valid even though dependent upon an invalid claim. . .'* (emphasis added) The legislative history of this section seems to indicate that a 'law of the case' approach in circumstances such as this is not favored. S. Rep. No. 301, 89 Cong. 1st Sess. reprinted in [1965] U.S. Code & Cong. Ad. News 2315, 2319." (Pet. App. B-9)

As emphasized in the House Report on this amendment, (H. Report No. 113, 89 Cong., 1st Session, March 1, 1965), the primary purpose of the bill was to raise revenue and simplify patent examination by charging a lower fee for claims in the dependent form than for normal independent claims. To encourage use of the

dependent form of claim the above quoted statutory language insured that the validity of a dependent claim would not be adversely affected by the invalidity of the independent claim on which it is based. Incidentally, the Winsand patent in suit contains no dependent claims, but the same principles apply to broad and narrow independent claims.

It is the position of respondent that the "law of the case" expression merely means that the point in question has been finally adjudicated and can no longer be disputed between the same parties. It does not mean that adjudication of other questions, even if similar in some respects, is precluded. There is nothing in the Senate report cited by Judge Engel nor in the House Report cited above that conflicts with that position.

While each claim enjoys a presumption of validity, a court could not sustain a claim merely because it called for the features of another claim that has been held invalid in a final adjudication. The presumption of Section 282 goes only to the complete combination of elements claimed in the unadjudicated claim. This point was dealt with in *Bournes, Inc. v. United States*, 537 F.2d 486, 493, (Ct. Cls. 1976), in a case involving application of a collateral estoppel under *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundaton*, 402 US 313 (1971) to claims of a patent which were *not* involved in a prior suit involving the same patent. In the *Bournes* case the Court of Claims said:

> "Moreover, it is well settled that each claim of a patent is entitled to a presumption of validity and is to be treated as a complete and independent invention, 35 U.S.C. §§ 282, 288. Leeds & Catlin v. Victor Talking Machine Co., 213 U.S. 301, 319, 29 S.Ct. 495, 53 L.Ed. 805 (1909); Smith Industries International v. Hughes Tool Co., 396 F.2d 735, 736 (5th Cir. 1968)

> "However, there is nothing in any of those long-accepted principles which appears to foreclose, or is inconsistent with, a determination that the issues bearing on validity of two separate claims are substantively the same. To assess the identity of those issues, it is convenient to compare the adjudicated and unadjudicated claims. Obviousness of the unadjudicated claims not being an issue, it is clear that the difference revealed by such comparisons must be evaluated, not in terms of obviousness under a domino approach, but rather, in terms of the Graham issues. *Where the differences revealed by a comparison of the claims do not vary the relevant issues bearing on obviousness, collateral estoppel should apply*. Westwood Chemical, Inc. v. Molded Fiber Glass Body Co., 380 F.Supp. 517 (N.D. Ohio 1973), aff'd 498 F.2d 1115 (6th Cir. 1974)."

Accordingly, Question 2 offers no ground for granting certiorari.

PETITIONER'S QUESTION 3

> "Does the last sentence of 35 USC 282 permit a district court to fashion a hypothetical combination of prior art to support a finding of invalidity in the court's post-trial deliberations where *no* evidence was submitted during trial as to the hypothetical combination relied upon by the court?"

The obvious answer to Question 3 is yes, because 35 USC 282 places no limitation on a court's right to exercise its judgment in expressing grounds for holding a patent

invalid based on evidence properly before it. The last sentence of 35 USC 282 is merely a *notice* statute. It requires defendants in patent infringement suits to give advance notice of prior art they intend to rely upon; and its sole purpose is to avoid surprise at the trial. The statute does not require that any notice be given of how each prior patent is to be used in defense of the action, nor does it require notice of combinations of prior patents that are separately noticed.

The patent statutes as early as that of 1836 have contained such a provision; and this Court in *The Philadelphia and Trenton Railroad Co. v. Stimpson*, 39 US 448 (1840) said:

> "The object of this most salutary provision (Section 15 of the Patent Act of 1836) is to prevent patentees from being surprised at the trial of the cause, by evidence of a nature which they could not be presumed to know or be prepared to meet. . ."

The substance of the section 282 and its purpose is the same as the 1836 statute.

However, the courts have always allowed the exercise of discretion when formal notice was not necessary to prevent surprise. The present (1952) statute allows for discretion by the concluding clause:

> ". . .except on such terms as the court requires."

In *Brown v. Piper*, 91 US 37 (1875), this Court took judicial notice of the universally known ice cream freezer, and held the patent in suit was invalid on its face as involving nothing more than an apparatus, for preserving fish that utilized the principles of an ice cream freezer, saying:

> "The statute requiring notice was not intended to apply in such cases."

Similarly, in *Henry Manufacturing Co. v. Commercial Filters Corporation*, 489 F.2d 1008, 1011 (7th Cir. 1972), the court excused the failure to give notice of a prior Hermann patent on the ground that it was placed in evidence by the plaintiff along with expert testimony in regard thereto and had been cited by the Patent Office against the patent in suit. See also *Paddies, Inc. v. Broadway Department Stores, Inc.*, 147 F.Supp 373, (S.D. Cal. 1956), and *Roller Bearing Company of America v. Bearing, Inc.*, 322 F.Supp 703, (ED Pa. 1971).

In the present case petitioner complains that no notice of the Girton patent 3,204,431 was given under 35 USC 282, but no notice was necessary because the Girton patent (Pet. App. F-1, J-1) was introduced in evidence by Dollar Electric Company as PX 10; and during plaintiff's prima facie case Mr. Winsand, the inventor of the patent in suit, testified that Girton '431 constituted the closest prior art of which he had knowledge when he made the invention of the patent in suit (Joint App. Ct. Appeals page 423). In addition, petitioner introduced in evidence a physical specimen of the Girton transformer (PX 10A) and a photograph of that specimen (PX 15) which were identified by Winsand (Joint App. Ct. Appeals page 395). Townsend Beaman, an expert witness for Dollar, testified that a chart (PX 154, Joint App. Ct. Appeals page 903) of prior art patents, including Girton '431 "relates to some of the prior art patents that I thought were of particular interest in establishing the state of the art" (Joint App. Ct. Appeals pages 466-469).

Having, itself, introduced the Girton '431 patent *and attested to its relevance*, Dollar is in no position to criticize the court for relying on it. The defendants were under no obligation to establish facts useful to their defense that were established or conceded by plaintiff during its prima facie case. Nor can Dollar assert surprise as to its own evidence. See *Shatterproof Glass Corp. v. Guardian Glass Co.*, 462 F.2d 1115, (6th Cir. 1972) *cert. denied* 409 US 1034 (1972), in which the court made the following statements:

> "The purpose of the Sec. 282 notice is to prevent surprise."
>
> * * *
>
> "The right to this notice may be waived, . . ."
>
> * * *
>
> "The mere breach of Sec. 282 does not necessarily require reversal. Absent the required notice, the trial court may still allow proof of prior art where fairness is not sacrificed, and in this regard 'much discretion is committed to the trial judge.' Thermo King Corporation v. White's Trucking Service, Inc., 292 F.2d 668, 677 (5th Cir. 1961)."

Applying these statements, it is clear that Dollar waived its right to notice under Section 282 by offering the challenged evidence itself and by establishing or admitting its relevance. Moreover, since there can have been no surprise, there is no unfairness, and the District Court's reliance on the evidence constitutes an implicit finding that fairness was not sacrificed.

CONCLUSION

No question of public importance is involved here other than the public interest in favor of invalidating patents which do not meet the standards established by Congress and elucidated by the Supreme Court. Petitioner, by raising and prosecuting specious claims, has subjected respondents to a heavy burden which is not justified by the realities of the situation.

Accordingly, the Petition should be denied.

Respectfully submitted,

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Birmingham, Michigan 48011
(313) 642-7000

Attorney for Respondents

Of Counsel:

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(313) 642-7000

September 16, 1982

APPENDIX A

List of subsidiaries (other than wholly owned subsidiaries) and affiliates of Ford Motor Company (U.S. Sup. Ct. Rule 28.1).

The principal United States and foreign affiliates and subsidiaries (other than wholly owned subsidiaries) of Ford Motor Company are as follows:

United States:

Eveleth Taconite Company
Fairlane Woods Associates (A Partnership)
Renaissance Center Partnership
Renaissance Center Phase II (A Partnership)
Fairlane Town Center (A Partnership)
Ford Aerospace & Communications Services, Inc.
Humboldt Mining Company
Mechanical Technology Incorporated
EDESA
ADELA
Maxwell Laboratories Incorporated
National Corporation for Housing Partnership
National Housing Partnership
Pooled Resource Investing in Minority Enterprise, Incorporated

Foreign:

Ford Motor Company of Canada, Limited
Ford Glass Industries Limited (Canada)
Ford Lio Ho Motor Company Ltd. (Taiwan)
Ford Motor Company of Malaysia, Sdn, Bhd, (Malaysia)
Ford Brasil S.A. (Brazil)
Ford Motor Company (Belgium) N.V.
Ford Motor Company A/S (Denmark)
O/Y Ford A/B (Finland)

Ford Motor Company Aktiebolag (Sweden)
Ford Nederlands N.V. (The Netherlands)
Escorts Tractors, Ltd. (India)
Hokkai Tractor Co., Ltd. (Japan)
Trans Canada Glass (Canada)
Compania Financiera de Inversiones y Credito, S.A. (Argentina)
RCA Solid State Ltd. (Brazil)
Toyo Kogyo, Ltd. (Japan)
Vitroflex (Mexico)
Carplastic S.A. (Mexico)
FCP Credit Corporation (Philippines)
FCP Finance (Philippines)
Ford Vehicle Finance (South Africa)
Bongotti S.A. (Brazil)
Fabrica de Tractors Agricolas, S.A. (Mexico)
Philco Radio e Televisao Ltda. (Brazil)

In addition to the foregoing, Ford Motor Company owns varying interests in the dealers in Ford automobiles, trucks or tractors and leasing companies set forth in the following list. The list was accurate as of July 31, 1982, and is the most current listing available:

ACTION LEASING & RENTAL INC, JACKSON, MISS
ADRIAN FORD-L-M INC, ADRIAN, MI
AL BENNETT FORD INC, FLINT, MI
AL PIEMONTE FORD SALES INC, MELROSE IL
ALL AMERICAN FORD INC, SAGINAW, MI
ALLEN KANE FORD INC, N. HOLLYWOOD, CA
ALPENA FORD L-M INC, ALPENA, MI
ALTRO LEASING INC, MOBILE, AL
AMERICAN AUTO LEASE, INC, FRAMINGHAM, MA
ANDREWS L-M INC, NEW BEDFORD, MA
ASTLEY LINCOLN-MERCURY, INC, CHILLICOTHE, OH
ATCHLEY FORD INC., OMAHA, NE
ATLANTIC FORD-MERCURY, INC, SACO, ME
AVALON FORD INC, CARSON, CA
BARRINGTON SALES & SERVICE, BARRINGTON, IL
BARTOW FORD LEASING INC, BARTOW, FLA

BATTLE CREEK FORD SALES, INC, BATTLE CREEK, MI
BAY STATE L-M INC, FRAMINGTON, MA
BEE FORD, INC, WATERBURY, CT
BELL L-M SALES INC, HIGHLAND PK, IL
BELLEROSE FORD IND, BELLEROSE, NY
BEN-HUR FORD SALES INC, SIOUX FALLS, SD
BERENS LINCOLN-MERCURY INC, CHICAGO, IL
BERKSHIRE FORD INC, READING, PA
BEST FORD INC, QUEENS VIL, NY
BEVERLY HILLS L-M SALES INC, BEVERLY HILLS, CA
BIG VALLEY FORD INC, STOCKTON, CA
BILL HOLTOM FORD INC, KANSAS CITY, KS
BILL LASKEY FORD SALES INC, MILAN, MI
BILL MC COY FORD L-M INC, MUNCIE, IN
BILL TONYES FORD INC, W HAVERSTRAW, NY
BILLY CANNON FORD INC, GUNTERSVILLE, AL
BILLY HOWELL FORD-MERC INC, CUMMING, GA
BLUE SPRINGS FORD SALES INC, BLUE SPRINGS, MO
BO LOVEIN FORD INC, NASHVILLE, GA
BOB BEARD FORD INC, AUGUSTA, GA
BOB BOYD LEASING INC, COLUMBUS, OHIO
BOB BURNETT FORD INC, GAINSVILLE, GA
BOB CHERRY FORD INC, NETCONG, NJ
BOB DORAN FORD INC, UNION, NJ
BOB HIGGINS L-M INC, TEXAS CITY, TX
BOB MEYER L-M INC, CINCINNATI, OHIO
BOB SINGER FORD INC, COLUMBUS, OH
BOB SNYDER FORD INC, ORRVILE, OH
BOB THOMAS FORD INC, HAMDEN, CT
BORCHERS FORD-L-M INC, RHINELANDER, WI
BRADLEY LINCOLN-MERCURY INC, DURHAM, NC
BRIDGE FORD INC, BROOKLYN, NY
BURLINGAME L-M INC, BURLINGAME, CA
C L C MOTORS INC, HOPSHAM, PA
CANDY FORD-MERCURY INC, CHARLOTTE, MI
CAPITOL LINCOLN-MERCURY, INC, CHICAGO HGTS, IL
CARRIAGE FORD INC, CLARKSVILLE, IN
CARSON LINCOLN-MERCURY INC, CARSON, CA
CENTRAL LINCOLN-MERCURY INC, EUGENE, OR
CENTURY FORD INC, ROCKVILLE, MD
CENTURY FORD OF EASTWOOD, BIRMINGHAM, AL
CENTURY FORD SALES, INC, ARLINGTON HT, IL
CHAMPION FORD INC, BALTIMORE, MD
CHAMPION MOTOR SALES INC, DALLAS, TX
CHEMUNG FORD INC, ELMIRA, NY

CHICAGO BUDGET RENT A CAR, ROSEMONT, ILL
CHINO HILLS FORD INC, CHINO, CA
CIVIC FORD INC, CANTON, OH
COASTAL FORD INC, MOBILE, AL
COLUMBIA L-M SALES INC, INDIANAPOLIS, IN
CONTINENTAL CAR & TRUCK LEASE, ROSEMONT, ILL
COUNTRY FORD INC, BELLE VERNON, PA
COVEY L-M SALES INC, PHOENIX, AZ
DAN BUCKLEY FORD, INC, SPRING VALLE, NY
DAN NEJA L-M INC, YUBA CITY, CA
DAVE KILHORN FORD INC, PITTSBURGH, PA
DAVE MARKLEY LEASING INC, YUKON, OK
DAYTON AUTO LEASE CO INC, KETTERING, OHIO
DEAN GONZALES FORD INC, BATAVIA, NY
DEAN YOUNG FORD INC, WILLIAMSPORT, PA
DEE HARRISON FORD INC, MONMOUTH, IL
DELANO FORD LINCOLN-MERCURY, DELANO, FL
DIABLO LINCOLN-MERCURY INC, CONCORD, CA
DIAMOND LINCOLN-MERCURY INC, HICKSVILLE, NY
DICK BOYD FORD INC, LUDINGTON, MI
DICK RUHL FORD SALES INC, COLUMBUS, OH
DON COURTNEY FORD-MERCURY, SANDWICH, IL
DON FORD RENTAL & LEASING, BILOXI, MISS
ED SHERLING FORD INC, ENTERPRISE, AL
ELIZABETH FORD INC, ELIZABETH, NJ
ELMHURST FORD INC, OAKLAND, CA
EMPIRE FORD SALES INC, MT VERNON, NY
ERDMAN-WILLKOMM FORD L-M, MANITOWAC, WI
ERNEST WHITE FORD INC, DELAWARE, OH
EVANSTON FORD INC, EVANSTON, IL
FAMILY FORD INC, NETCONG, NJ
FAMILY FORD SALES & SERVICE, W CHICAGO, IL
FAMILY FORD SALES INC, SPARTANBURG, SC
FITZGERALD FORD INC, GIG HARBOR, WA
FIVE POINTS FORD INC, ALIQUIPPA, PA
FOUR SEASONS L-M INC, STATEN IS, NY
FOX VALLEY FORD INC, AURORA, IL
FRANK COLETTO FORD INC, HARBOR CITY, CA
FRANK PROTO L-M INC, HUNTINGTON, CA
FRED DRENDALL L-M SALES INC, PONTIAC, MI
FREEWAY FORD INC, COLUMBUS, GA
FREMONT FORD SALES INC, FREMONT, CA
FRIENDLY FORD INC, MONROE, MI
FT. WAYNE L-M INC, FORT WAYNE, IN

FULLER FORD INC, CINCINNATI, OH
FUTURE FORD INC, HOMESTEAD, PA
GATEWAY FORD INC, OZONE PARK, NY
GENE WULBERT FORD INC, OAK PARK, IL
GEORGE HALL FORD INC, KAUKAUNA, MI
GLENN LAKEY FORD INC, MUSKEGON, MI
GRAND FORD INC, BRONX, NY
GREENVILLE FORD-L-M INC, GREENVILLE, MI
GUS SHAFFAR FORD INC, DALLAS, TX
GUS SHAFFAR FORD INC, JOPLIN, MO
HAL CURTIS FORD INC, MARLBORO, MA
HAMMONASSET FORD-L-M INC, MADISON, CT
HARDING STRAUSS LEASING, RICHMOND, VA
HASSESTT L-M SALES INC, WANTAGH, NY
HERITAGE FORD INC, MODESTO, CA
HERITAGE FORD-L-M INC, COCKEVILLE TN
HERITAGE FORD-MERCURY INC, LAURINBURG, NC
HIGHLAND PARK FORD INC, HIGHLAND PARK, IL
HILLTOP FORD INC, TAMAQUA, PA
HILLTOP FORD SALES INC, RICHMOND, CA
HOLLYWOOD L-M INC, HOLLYWOOD, CA
HOPKINS FORD INC, JENKINSTOWN, PA
HUNDLEY FORD INC, PROVIDENCE, KY
ILLINOIS AUTO LEASING INC, LIBERTYVILLE, IL
INDIAN SPRINGS FOPD INC, KANSAS CITY, KS
INTERSTATE FORD INC, MIAMISBURG, OH
INTERSTATE FORD SALES INC, ST. JOSEPH, MO
JACK LOFTUS FORD INC, WILLOWBROOK, IL
JIM COLE FORD INC, PITTSBURGH, PA
JIM DIXON LINCOLN-MERCURY, FAIRFIELD, OH
JIM EWING FORD INC, CHARLOTTESVI, VA
JIM HOUSTON FORD INC, FEDERAL WAY, WA
JIM SHORT FORD SALES, INC, BIRMINGHAM, AL
JIM WHALEN FORD SALES INC, ELGIN, IL
JOE CARINI L-M SALES INC, WAUKESHA, WI
JOHN FORMOLO FORD INC, GLENDALE, WI
JOHN STRIALING FORD INC, KLAMATH, OR
KARR'S FORD SALES INC, HOUGHTON, MI
KELLER LEASING & RENTAL INC, GRAND RAPIDS, MI
KEN HILTON FORD SALES INC, BIRMINGHAM, AL
KERRY LEASING INC, CINCINNATI, OHIO
KEYSTONE FORD INC, NORWALK, CA
KING'S COLONIAL FORD INC, BRUNSWICK, GA
KING'S CROWN FORD INC, JACKSONVILLE, FL
KINGSROW FORD L-M INC, HANFORD, CA
KNIGHT LINCOLN-MERCURY INC, WYNNEWOOD, PA

KUHNS-HARNISH FORD INC, MECHANICSBUR, PA
KUMFCO AUTO LEASE CO, ENGLEWOOD, COLO
LAKE-LINE MOTORS INC, KENOSHA, WI
LANDMARK FORD SALES INC, FAIRFIELD, OH
LAWRENCE L-M INC, TRENTON, NJ
LEBANON FORD INC, LEBANON, OR
LEEDS FORD INC, CHICAGO, ILL
LEWIS DYER FORD-MERCURY INC, LA FAYETTE, GA
LIBERTYVILLE L-M SALES INC, LIBERTYVILLE, IL
LIMA LINCOLN-MERCURY INC, LIMA, OH
LOMBARD LINCOLN-MERCURY INC, LOMBARD, IL
LOUNSBURY FORD INC, COQUILLE, OR
LYNCHBURG FORD INC, LYNCHBURG, VA
MANHATTAN FORD INC, MANHATTAN BE, CA
MANHATTAN FORD L-M INC, NEW YORK, NY
MANOR FORD INC, E NORTHPORT, NY
MARKLEY FORD INC, RICHARDSON, TX
MARPLE FORD INC, PA
MARSHAL MIZE FORD INC, HIXSON, TN
MAYFAIR FORD INC, MILWAUKEE, WI
MC CAFFERTY FORD SALES, INC, LANGHORNE, PA
MCBAIN L-M LTD INC, MILWAUKEE, WI
MCDONALD FORD EAST INC, DETROIT, MI
MEL BURNS FORD INC, LONG BEACH, CA
MEL FARR FORD INC, OAK PARK, MI
MERRIMACK L-M INC, METHUEN, MA
METRO FORD SALES INC, SCHENECTADY, NY
METROPOLITAN L-M INC, LOUISVILLE, KY
MIDDLEKAUFF FORD INC, DALLAS, TX
MILLER-MCVEIGH LEASING INC, ST COLLEGE, PA
MILLINOCKET FORD-MERC INC, MILLINOCKET, ME
MIRACLE FORD INC, GALLATIN, TN
MISSION LINCOLN-MERCURY INC, HAYWARD, CA
MONARCH LEASING INC, SUNNYVALE, CA
MONTROSE FORD INC, AKRON, OH
MTM. VIEW FORD INC, CHATTANOOGA, TN
NELSON FORD-MERCURY INC, DEFUNIAK, FL
NEW ROCHELLE L-M INC, NEW ROCHELLE, NY
NIAGARA FALLS L-M INC, NIAGARA FLS, NY
NILES FORD L-M INC, NILES, MI
NORM JOSEPH FORD INC, DAVISON, MI
NORMAN LINCOLN-MERCURY INC, WESTBROOK, ME
NORTH BROS FORD LEASING INC, GARDEN CITY, MI
NORTH CENTRAL SALES INC, RICHARDSON, TX

NORTH HILLS L-M SALES INC, FORT WORTH, TX
NORTH LINCOLN-MERCURY INC, INDIANAPOLIS, IN
NORTH STAR L-M INC, POUGHKEEPSIE, NY
NORTHEAST LEASING INC, WASHINGTON, DC
NORTHTOWNE L-M INC, KANSAS CITY, MO
OAK LANE FORD INC, PHILADELPHIA, PA
OLD SOUTH FORD INC, LEXINGTON, NC
OLDE TOWNE L-M SALES INC, WINDSOR, CT
ONE MOORE FORD INC, LITTLEROCK, AR
PACIFIC FORD INC, LONG BEACH, CA
PARKVIEW FORD INC, MIDDLETOWN, OH
PARKWAY FORD INC, MADISONVILLE, KY
PENN CIRCLE FORD INC, PITTSBURGH, PA
PEYTON CRAMER LEASING INC, REDONDO BCH, CA
PITTSBURGH FORD INC, PITTSBURGH, CA
PLAINFIELD L-M SALES INC, GRAND RAPIDS, MI
POPULAR FORD INC, BROOKLYN, NY
POPULAR FORD SALES INC, BROOKLYN, NY
POUGHKEEPSIE FORD INC, POUGHKEEPSIE, NY
PRESTIGE L-M INC, NANUET, NY
PRIDE LINCOLN-MERCURY INC, LYNN, MA
RAMSEY-STURMAN FORD INC, W MIFFLIN, PA
RAY ELLIS FORD INC, AMSTERDAM, NY
REDWOOD L-M LEASING INC, S FRANCISCO, CA
RENAISSANCE FORD INC, DETROIT, MI
RICK HUNT FORD INC, WARRENTON, VA
RIO HONDO FORD INC, MONTEBELLO, CA
RIVER CITY L-M INC, SACRAMENTO, CA
RIVER OAKS L-M INC, CALUMET CITY, IL
RIVERSIDE L-M INC, MADISON, TN
ROBERTS MOTOR SALES INC, ATTLEBORO, MA
ROCK RIVER FORD INC, ROCKFORD, IL
ROGER KARNS FORD INC, ONEONTA, NY
ROMEO FORD INC, ROMEOVILLE, IL
RON ROBERTS FORD INC, WICHITA FALL, TX
ROSLYN FORD INC, GREENVALE, NY
ROWAN LINCOLN-MERCURY INC, WINTER HAVEN, FL
SAM JOHNSON L-M INC, CHARLOTTE, NC
SAN BRUNO FORD INC, SAN BRUNO, CA
SAN FRANCISCO L-M INC, SAN FRAN, CA
SANGER FORD MERCURY INC, SANGER, CA
SANTA BARBARA L-M INC, S BARBARA, CA
SEEKINS FORD-L-M INC, FAIBANKS, AK
SENTRY L-M SALES INC, MEDFORD, MA
SHEEHY LINCOLN-MERCURY, INC, SPRINGFIELD, PA
SHEN LINCOLN-MERCURY INC, BURLINGAME, CA

SHIRETOWN FORD INC, PLYMOUTH, MA
SHOEMAKER-FINCH FORD INC, SPRINGFIELD, OH
SINCLAIR MEANS FORD INC, DAYTON, OH
SOUTHERN L-M INC, DECATUR, GA
SOUTHGATE FORD SALES INC, MILWAUKEE, WI
SPALDING FORD-L-M INC, GRIFFIN, GA
SPOKANE L-M SALES INC, SPOKANE, WA
SPRINGFIELD FORD L-M INC, SPRINGFIELD, TN
SPRINGFIELD L-M CO INC, SPRINGFIELD, MA
STADIUM LINCOLN-MERCURY INC, YOUNGSTOWN, OH
STAN JOHNSON FORD SALES INC, NEEHAN, WI
STAN MARTIN FORD INC, HUDSON, NY
STARKVILLE FORD-MERCURY INC, STARKVILLE, MS
STEVE HARRIS FORD L M INC, LA GRANGE, GA
STUARD FORD INC, FERRIDAY, LA
SUBURBAN FORD SALES INC, IMPERIAL, MO
SWANSON FORD SALES INC, FEDERAL WAY, WA
TARGET FORD, MONROEVILLE, PA
TATE FORD LINCOLN-MERCURY, HOLBROOK, AZ
TAYLOR L-M SALS INC, CINCINNATI, OH
TERRY AUTO LEASE INC, POMPANO BCH, FLA
TERRY'S LEASING INC, ORLAND PARK, ILL
TOM MOLZER FORD INC, FARMINGTON HL MI
TOM MC CLELLAN FORD INC, AMARILLO, TX
TOM SHERIDAN FORD-MERC INC, BRYAN, OH
TOTTEN-EVERT FORD-L-M INC, MARQUETTE, MI
TOWER FORD SALES INC, BALTIMORE, MD
TRISTATE FORD INC, ELKTON, MD
TROY MOTORS LEASING INC, TROY, MI
TURNER FLANNERY LEASING INC, TROY, MI
TWIN AUTO LEASING & RENTAL, PLAINWELL, MI
UNIVERSITY FORD SALES & SER, BOWLING GRN, OH
VAN NUYS L-M INC, VAN NUYS, CA
VANTAGE FORD-L-M INC, EL DORADO, KS
VARSITY FORD INC, ANN ARBOR, MI
VASSALL-DILWORTH L/M INC, PHILADELPHIA, PA
VILLAGE FORD INC, DEARBORN, MI
WAYNE BLACKWOOD L-M INC, ROME, GA
WAYNE RUSSELL FORD INC, ANGLETON, TX
WAYNESBORO FORD-MERCURY INC, WAYNESBORO, PA
WESTWAY MOTOR SALES INC, IRVING, TX
WHITE PLAINS FORD SALES INC, WHITE PLANES, NY
WHITEWATER FORD L-M INC, CONNERSVILLE, IN
WILLOWBROOK FORD INC, WILLOWBROOK, IL
WOLTZ & WIND FORD, HEIDELBERG, PA
WYATT LINCOLN-MERCURY INC, REDDING, CA
ZAREK FORD INC, CHICAGO, IL

APPENDIX B

OPINION

(United States District Court
Eastern District of Michigan
Southern Division)

(Dollar Electric Company, Plaintiff vs Syndevco, Inc., and Ford Motor Company, Defendants, Civil Action Nos. 7-70057 and 8-71705)

In an opinion dated September 10, 1979, in the above-captioned case, I found, *inter alia*, that claims 4 and 5 of the Winsand patent were invalid because they are not "non-obvious." 35 U.S.C. § 103. (Opinion, at 28, 29.) Thus, plaintiff's claim of patent infringement as to these claims failed. Plaintiff now requests a finding that claims 4 and 5 of the Winsand patent are not obvious and are, therefore, valid.

Its arguments are essentially: that there is no evidence submitted as to the "obviousness" of claims 4 and 5, and therefore I could not properly make such a finding; and, based on the evidence submitted, a finding of obviousness was unwarranted.

Plaintiff argues that since there was "no expert testimony, lay testimony, documentary evidence, or physical evidence" (plaintiff's reply brief, p. 3) as to the obviousness of claims 4 and 5, I cannot make such a finding. It is clear from the case law, however, that "obviousness" is a determination to be made primarily on evidence adduced as to three factual questions.

> While the ultimate question of patent viability is one of law (citation omitted), the § 103 condition, which is but one of three conditions, each of

> which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. *Graham* v. *John Deere*, 383 U.S. 1,17 (1965).

As to these factual questions, substantial evidence and testimony was submitted and considered by me. (*See*, Opinion, pp. 10-28.) I therefore do not accept plaintiff's argument here that a finding of "obviousness" could not be made because there was no evidence to support it.

Plaintiff relies particularly on appellate decisions in *Buzzelli* v. *Minnesota Mining & Mfg.*, 480 F.2d 541 (6th Cir. 1973); *Tee-Pak* v. *St. Regis Paper*, 491 F.2d 1193 (6th Cir. 1974); *Tapco Products* v. *Van Mark*, 446 F.2d 420 (6th Cir. 1971); *Reiner* v. *I. Leon Co.*, 285 F.2d 501 (2nd Cir. 1960). It derives from these cases the principle that I may not on my own determine the issue of obviousness without expert testimony, declaring that the patent was obvious from the prior art. While these opinions do contain such statements, which, if taken out of context, support plaintiff's argument, in fact none of these opinions disagrees with the test laid down in *Graham*, *supra*. For example, in *Reiner*, at 504, Judge Hand states

> The test laid down is indeed misty enough. It directs us to surmise what was the range of ingenuity of a person 'having ordinary skill' in an 'art' with which we are totally unfamiliar; and we

> do not see how such a standard can be applied at all except by recourse to the earlier work in the art, and to the general history of the means available at the time. To judge on our own that this or that new assembiage of old factors was, or was not, 'obvious' is to substitute our ignorance for the acquaintance with the subject of those who were familiar with it. There are indeed some sign posts: e.g., how long did the need exist; how many tried to find the way; how long did the surrounding and accessory arts disclose the means; how immediately was the invention recognized as an answer by those who used the new variant?*

See also, Tapco, supra, at 426; *Tee-Pak, supra*, at 1198 (court specifically not making a finding of obviousness); *Buzzelli, supra*, at 543.

The second argument raised by plaintiff is that the finding of obviousness as to claims 4 and 5 is unwarranted based on the evidence considered by me. In support of this position plaintiff singles out a number of statements and conclusions in the opinion which, it argues, were in error. These for the most part concern matters raised as "Secondary Considerstions." (Opinion, pp. 29,30.) Without deciding the merits of plaintiff's claim of error as to these issues, I do not find that these considerations, even if reversed, would change my determination that claims 4 and 5 were "obvious" and, therefore, invalid. That determination relies primarily on the test laid down by the United States Supreme Court in *Graham*; although these secondary considerations give further support, they are not crucial to that decision.

---

* (The United States Court of Appeals for the Second Circuit reversing summary judgment because of factual issues involved in finding of obviousness.)

Plaintiff also disagrees with certain statements made in the opinion as to the non-complexity of the patent claims. However, I have considered all the evidence in making my decision in this case. Plaintiff points to no new issues nor to any evidence not considered by me. I therefore deny plaintiff's motion to reconsider the evidence and amend the findings.

An appropriate order is entered herewith.

/s/ John Feikens
Chief United States District Judge

Dated: December 26, 1979
Detroit, Michigan

ORDER

(United States District Court)

At a session of said Court, held in the United States Courthouse, in the City of Detroit, Wayne County, Michigan, this 26th day of December, A.D. 1979;

Present: The Honorable John Feikens
Chief United States District Judge

In accordance with the accompanying opinion, and for the reasons stated therein,

IT IS ORDERED that plaintiff's motion to reconsider the evidence and amend the findings be, and hereby is, DENIED.

/s/ John Feikens
Chief United States District Judge

Plaintiff also disagrees with certain statements made in the opinion as to the non-complexity of the patent claims. However, I have considered all the evidence in making my decision in this case. Plaintiff points to no new issues nor to any evidence not considered by me. I therefore deny plaintiff's motion to reconsider the evidence and amend the findings.

An appropriate order is entered herewith.

/s/ John Feikens
Chief United States District Judge

Dated: December 26, 1979
Detroit, Michigan

ORDER

(United States District Court)

At a session of said Court, held in the United States Courthouse, in the City of Detroit, Wayne County, Michigan, this 26th day of December, A.D. 1979;

Present: The Honorable John Feikens
Chief United States District Judge

In accordance with the accompanying opinion, and for the reasons stated therein,

IT IS ORDERED that plaintiff's motion to reconsider the evidence and amend the findings be, and hereby is, DENIED.

/s/ John Feikens
Chief United States District Judge

Office - Supreme Court, U.S.
FILED
OCT 1982
STEVAS,
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No. 82-291

IN THE

Supreme Court of the United States

October Term, 1982

DOLLAR ELECTRIC COMPANY,
Petitioner,
v.
SYNDEVCO, INC., and
FORD MOTOR COMPANY,
Respondents.

REPLY BRIEF OF PETITIONER

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Response To Respondents' "Supplemental Statement Of The Case"

The statement in the first paragraph that ". . . The Winsand patent . . . barely mentions . . . that the disclosed transformer may be used in a resistance welding operation," is patently misleading. The introductory sentence of the specification states "This invention relates generally to transformers and refers more particularly to *resistance welding transformers*." The specification explicitly describes resistance welding transformers (Column 2, lines 1-3): "Electrodes 23 are connected to the secondary and may be employed to effect a weld, as shown in Figure 4."

The second paragraph of Respondents' Supplemental Statement Of The Case is in error. None of the claims were ever rejected in the Patent Office on the basis of the German Patent to Bauer, No. 1,303,494, or over Bauer in combination with a U.S. Patent to Girton 3,024,431.

The sentence bridging pages 2 and 3 of respondents' Brief "The district court opinion . . . held that Winsand was estopped . . ." is not correct. The district court held that the claims could not be considered *limited* to the resistance welding art so as to exclude from consideration as prior art transformers outside the resistance welding art.

In the second paragraph, page 3, respondents state that there is no evidence of a long felt need or commercial success because "Eighteen years after the alleged invention Ford Motor Company is still using the Girton '431 construction." This is simply contrary to the record and the findings of both courts below. Respondent Ford has conceded on the record that it is *replacing all of the Girton '431 transformers* at its Metal Stamping Division with the Winsand invention as embodied in the accused transformers. Further, the Winsand invention is used throughout the automotive industry as found by the district court (Petitioner's App. A-34): "Plaintiff's proofs that Winsand has been successful stand unrefuted. Ford has adopted as its *standard* a device virtually identical to Winsand, after previously using Winsand itself for some time. Fisher Body [division of General Motors] also accepted the device." (emphasis added). The advantages of the

Winsand invention are such that Ford went to great expense to convert Girton '431 transformers to the invention, Petitioner's Appendix B-4:

> Syndevco does not manufacture complete transformers, so Ford purchased Girton '431 transformers and supplied them to Syndevco. *Syndevco then cannibalized the Girton's and fitted them with the end cover and primary disconnect plug of the accused transformers.* (emphasis added)

Response To Respondents' Argument On Petitioner's Question 1.

This portion of respondents' Brief, on pages 6-8, *support* this petition except to the extent that it incorrectly suggests that the district court abandoned the synergistic test. This is not correct. The district court, in its published decision, affirmed by the court of appeals below, adopted the test set forth in the dissenting opinion of Justices White and Brennan in *Roanwell Corp. v. Plantronics, Inc.*, 429 U.S. 1004 (1976). Both the published decision and supplemental opinion of the district court contains the "anomalous encrustation of 35 USC § 103" of the test of synergism, *Hammerquist v. Clarke's Sheet Metal, Inc.*, 658 F.2d 1319, 1323, n.7 (9th Cir. 1981). It is thus in direct conflict with the plain language of 35 USC § 282 "A patent shall be presumed valid." Under the "synergistic" test, a so-called "combination" patent is presumed *not* to be valid; the starting point of the synergistic test is that there is "an improbability of producing a synergistic result from a combination of old elements . . ." This test has been

rejected by the Court of Customs and Patent Appeals and the Court of Claims. See e.g., *Application of McLaughlin*, 443 F.2d 1392, 1395-96 (CCPA 1971):

> A patentable invention, within the ambit of 35 USC § 103, *may* result even if the inventor has in effect, merely combined features, old in the art, for the known purpose, without producing anything beyond the results inherent in their use.

And *Bowser, Inc. v. United States*, 388 F.2d 346, 349 (Ct. Cl. 1967):

> We feel, therefore, that § 103 has eliminated the need to apply 'severe tests' of patentability such as 'unusual and unexpected result' and 'the whole must in some way exceed the sum of its parts,' *and the fact that a patent in issue is a combination patent provides no exception*. (emphasis added).

The new Court of Appeals for the federal circuit (CAFC) is made up of judges from the Court of Claims and the Court of Customs and Patent Appeals. Chief Judge Markey of the Court of Customs and Patent Appeals, who will be Chief Judge of the CAFC, has announced that the CAFC will accept as precedent prior decisions of the CCPA and Court of Claims which, by implication, reject the "synergistic" test of *Sakraida v. Ag Pro*.

The synergistic test was applied by the courts below in conflict with what will apparently become the law of the CAFC.

Response To Respondents' Argument On Petitioner's Question 2.

Respondents' Brief, pages 12-15, skirts the issue raised in the court of appeals' opinion. The court of appeals did *not* independently consider claims 4 and 5. Instead, the court of appeals concluded invalidity of claims 4 and 5 from an invidious comparison of claims 4 and 5 with claims 1-3, based upon a further presumption that claims 1-3 are invalid. This is contrary to the plain language and intent of the statute, as recognized by Judge Engles in his concurring opinion.

Response To Respondents' Argument On Petitioner's Question 3.

The Brief for the respondents, page 16, states "The present (1952) statute allows for discretion by the concluding clause [of § 282]: ". . . except on such terms as the court requires," thus astutely omitting the critical words contained in that clause *"at the trial."* Section 282 is flatly circumvented by the courts below under the aegis of synergism. There was *no* "proof of the said matters . . . *at the trial*. . ." on any terms. The plain language of the statute "in the absence of such notice proof of said matters *may not be made at the trial* except on such terms as the court requires. . ." expressly requires the patentee to have an opportunity *at the trial* to rebut any defenses to the validity of the patent — in the absence of which proof the court cannot consider "said matters." The synergistic test requires a presumption of *in*validity contrary to the first sentence of

§ 282. Once the court has made a determination that a "combination" patent is involved, the synergistic test has been interpreted by the courts below to permit the district court to ignore both the first and last sentences of § 282. Section 282 is judicially eviscerated by the "synergistic" test.

CONCLUSION

That the "synergistic" test raised by this court in *Anderson's-Black Rock* and *Sakraida* is contrary to the statute is further supported by the fact that the "synergistic" test was not applied by this Court in *United States v. Adams*, 383 U.S. 39 (1966) decided on the same day as *Graham v. Deere*. The Adams battery was a "combination," 383 U.S. at 50: "If such a combination is novel, the issue is whether bringing them together as taught by Adams was obvious in light of the prior art." This Court then went on to find that the Adams battery was both novel and unobvious under § 103, and did not in any way suggest that "synergistic" test should be an "encrustation" on § 103.

At least two members of this Court have suggested that Congress is constitutionally barred from establishing a statutory presumption of validity for so-called "combination" patents, *Roanwell Corp. v. Plantronics, Inc.*, No. 76-488, 429 U.S. 1004, "Thus, to be patentable, a combination of elements must produce something more than the sum of the pre-existing elements; there must be a synergistic result that is itself nonobvious."

If that is the law, as suggested by this Court in *Anderson's-Black Rock* and *Sakraida*, the Court should forthrightly express it, together with a decision defining what is meant by a "combination" and a "non-combination" patent. Nobody knows what a "non-combination" patent is in the mechanical and electrical arts. For all practical purposes, if the law is what is urged by Justices White and Brennan, there is a presumption that all patents in the mechanical and electrical arts are *not* valid, and that the statutory presumption of validity of § 282 does not apply in those cases. This is the law that was followed by courts below in the case at bar. Dollar overcame all defenses raised by respondents prior to and *during trial*. Nevertheless, in reliance on the "synergistic" test, the district court first presumed the patent *not* to be valid, then, in the post-trial deliberations, sua sponte found a reason to support its conclusion of invalidity despite all objective evidence to the contrary.

Respectfully submitted,

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